

Carolina

PUBLIC HEALTH

School of Public Health ■ The University of North Carolina at Chapel Hill

Conquering Health Disparities

WINTER 2006

Shattering the "Status Quo"
Engaging with Communities Worldwide
Training Tomorrow's Leaders



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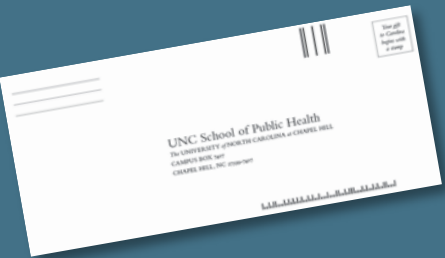
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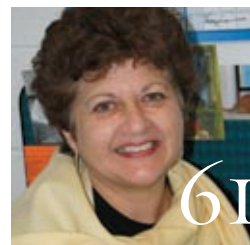
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Carolina PUBLIC HEALTH

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Cover photo: A rainbow of bubbles surrounds Sherina Combs, 6, of Clinton, N.C., whose mother, Consuela Combs, is on the Duplin-Sampson County Community Advisory Committee for the UNC School of Public Health's HOPE Works project. Read more on page 9. Cover photo by Will Owens.

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from the Dean's desk



DR. BARBARA K. RIMER

We chose to focus this issue of *Carolina Public Health* on health disparities out of a deep conviction that

eliminating health disparities is one of the most important tasks before us, as individuals, as a school and as a nation. In too many areas—diabetes, cancers, stroke, cardiovascular disease, to name a few—members of ethnic minority groups are disproportionately and unjustly burdened. The disparities between race/ethnic groups have been well documented, e.g., *Racial and Health Disparities in North Carolina Report Card 2006* (www.ncminorityhealth.org) and the *2005 National Healthcare Disparities Report* from DHHS (www.ahrq.gov). Some health-related disparities are avoidable. We have the knowledge today to close the gaps if we have the will.

There are many important scientific questions that must be answered and more effective interventions that still are to be developed and tested before we close all the gaps between population groups. In this magazine, you will find examples of how, in every department of this School and in the North Carolina Institute for Public Health, our faculty members are conducting research, teaching and practice to eliminate health disparities.

Many students come to Carolina because they care about eliminating health disparities and want to make a difference. Many of our best and brightest students, faculty and staff are focused on understanding the roots of health disparities, developing and testing policies and interventions to overturn disparities, translating what we have learned into policies and practices and teaching about what we have learned. This critical mass of scholarship, teaching and service is part of what makes Carolina's School of Public Health so strong.

If people don't have clean water, healthy food, access to health care, safe means of transportation and good educations, they will not progress. Economics, public education, politics and public health are deeply interwoven. Progress is about having the right technologies or solutions to improve health and getting them to people so they are used—like insecticide-impregnated mosquito nets to prevent malaria. We know from research done at the Carolina School of Public Health and elsewhere that getting discoveries to people is harder than it seems and much harder than it should be. Yet, it is one of the major obstacles to reducing health disparities.

Our School has been engaged in overcoming social and health injustices since its earliest days. It is part of our DNA, as you will find in reading the timeline and historical articles on pages 47-54. We are proud to continue this tradition of working collaboratively in communities around North Carolina to overcome barriers to good health for all.

Faculty members across our School are leading studies to improve health behaviors and reduce the chances that people will get serious diseases. These faculty have pioneered a tool to assess health literacy among Spanish-speaking patients, used lay health advisors to increase use of mammography in Eastern North Carolina, improved eating behaviors among members of African-American churches in North Carolina and are intervening via beauty parlors to increase healthy behaviors in African-American women.

What we do also spans the policy arena. One of the most important lessons of the last century was a recognition of the multiple layers and levels that must be changed to achieve big changes in health behaviors and disease outcomes. This is something our faculty members do extraordinarily well.

Our students, too, are making a difference, both within the School of Public Health, through organizations like the Minority Student Caucus, through the minority health conference they sponsor yearly and through their amazing dedication to community activities, such as Carolina for Kibera.

And yet, we must do even more. The invisible side of our successes, the real rest of the story, is the wall we hit because of a lack of resources. It's the communities we might have gone into, the technology we might have tested, and the faculty we might have recruited. We have excellent, dedicated students, but we lose too many when they must pass us by for other schools that can offer full scholarships. That's where we need you, our friends and donors. To speed the pace of positive change, we need your transformational gifts. The challenges of public health are vast and deep. Help us change the world, and you will make a world of difference.

Barbara K. Rimer

Shattering the “Status Quo”



PHOTO BY RICK DOVE

Researchers work with communities to overturn disparities and improve health.

BY GENE PINDER

It all started when a group of North Carolina residents felt compelled to raise a stink.

In the early 1990s, large, industrial hog farms were locating and expanding in rural eastern North Carolina—particularly near communities of low-income African-Americans.

By the late 1990s, the N.C. General Assembly had a moratorium on the construction of new and expanding industrial swine operations in place for the state, but debate still simmered sometimes about whether to lift it.

Responding to this potential threat, a grassroots organization—The Concerned Citizens of Tillery—stepped up to fight for their community and others across the region by partnering with the North Carolina Hog Roundtable to present their case to the General Assembly.



PHOTO BY RICK DOVE

In the floodwaters of Hurricane Floyd (left), somewhere between 50,000 and 500,000 hogs perished. Most were buried in the adjoining wet fields. North Carolina citizens protest hog pollution outside of General Assembly buildings in Raleigh, N.C. (above).

Composed of grassroots community groups and environmental groups like the Neuse River Foundation, the Roundtable was formed several years earlier at the initiation of the Concerned Citizens of Tillery. It represents the combined efforts of groups concerned about North Carolina's hog industry and its effect on the environment, wildlife, human health and personal property.

The Roundtable maintained that industrial hog farms were a threat to the quality of life, health and well-being of rural residents who did not benefit economically from corporate agriculture. Hog waste lagoons flooded during heavy rains or hurricanes and, they claimed, contaminated their wells. They suffered a host of health ailments such as persistent headaches, runny noses and sore throats they believed were attributable to the presence of the farms.

And, of course, there was the *smell*—a foul odor that found its way into every corner and crevice of their lives. It meant keeping their windows closed at all times. It also meant curtailing outdoor activities. The people of Tillery were mad, and they wanted to do something about it.

There was only one problem. No scientific studies had been conducted in North Carolina linking their health problems to the farms, and Tillery residents could not afford to conduct this research themselves. Without it, the moratorium was in jeopardy, and the status quo would remain, regardless of the potential health consequences. ►►

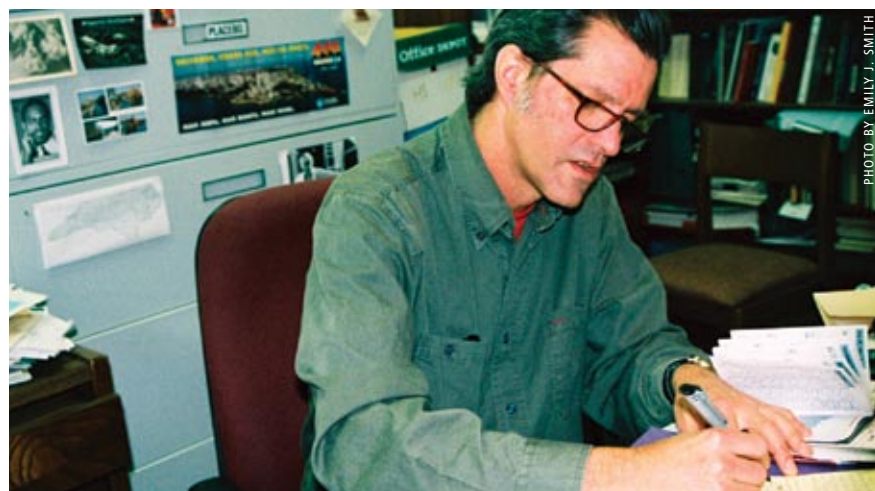


PHOTO BY EMILY J. SMITH

Enter UNC School of Public Health Epidemiologist Dr. Steve Wing and his research team.

Wing had heard about the group's plight through a network of friends and colleagues. With a grant from the National Institute of Environmental Health Sciences, he decided to examine the claims.

Wing and other UNC researchers analyzed the location and characteristics of 2,514 hog operations in relation to the racial, economic, population density and water source characteristics of census block groups and neighborhoods within North Carolina. They found that

hog operations were about five times as common in the highest three quintiles of the nonwhite population as compared to the lowest. The evidence was clear. Whether intended or not, industrial hog farms were indeed most prevalent in areas with both high poverty and a high percentage of nonwhites.

Armed with this new information, the Roundtable took their case to the General Assembly and helped convince the state to keep the moratorium—a moratorium which still exists.

Wing wasn't finished. In another study, he and other UNC researchers investi-

gated the group's claims that their deteriorating health conditions were caused by the hog farms and their waste lagoons. After interviewing 155 individuals, Wing and his team found that certain respiratory and gastrointestinal problems were elevated for people living near an industrial hog farm compared to other rural residents.

For Wing, arming community members with facts was rewarding.

"It's exciting to be involved in this kind of work," he says. "Too often in academia, we tend to focus on one very narrow issue. This particular project allowed us

to look at and be involved in the entire picture—from the analysis and research to the public policy efforts."

Wing's research is just one example of numerous research and intervention efforts underway at the UNC School of Public Health to overcome inequities in health and change the status quo. Read on for more examples. These projects are real-world applications that are changing and improving people's lives—people who often don't have the resources or the power to overcome the many hurdles that stand in the way of bettering their health and that of their families. ■

UNC Associate Professor of Epidemiology Dr. Steve Wing (above) works in his office on the Carolina campus. Wing and other UNC researchers analyzed the location and characteristics of 2,514 North Carolina hog operations and found that industrial hog farms were most prevalent in areas with both high poverty and a high percentage of nonwhites. Flood waters are shown here (right) washing hog waste from hog confinement buildings. Such waste has been known to pollute groundwater and the drinking wells of nearby residents.



PHOTO BY RICK DOVE

Status Quo

Into the Mouths of Babes

Dr. Gary Rozier, professor of health policy and administration at the UNC School of Public Health—along with colleagues—has dedicated the past seven years to a single, important goal—getting appropriate dental care to one of North Carolina's most vulnerable populations—young, disadvantaged children.

The problem is significant, says Rozier, who holds a Doctor of Dental Surgery from UNC. According to the U.S. Surgeon General, tooth decay is the most common chronic childhood disease, five times more prevalent than asthma. Four out of 10 North Carolina children enter kindergarten having had tooth decay. Most are from poor or disadvantaged families. And while evidence suggests that early intervention for dental disease is important for the long-term health of these children, societal, geographic and cultural reasons often prevent them from getting the care they need.

Sometimes, the lack of care is due to a shortage of dentists in poor or rural communities. Other times, it is caused by parents being unable or unwilling to take time off from work to wait in a dental office. For others, the cost of fluoride toothpaste is an obstacle. Compounding the problem is the fact that some dentists don't accept Medicaid-reimbursed patients.

With help from Dr. Jim Bawden, former dean of the UNC School of Dentistry, and Dr. Rebecca King, chief of the Oral Health Section of the N.C. Department of Health and Human Services, Rozier and others came up with a novel idea—train pediatricians and family physicians to screen infants and toddlers for dental disease, apply fluoride varnish to their teeth, and counsel parents on oral health. Although new to dentists' armamentarium, painting fluoride on teeth was, ►►



PHOTO BY RICK DOVE

Pollution from hog farms makes its way to rivers like the Neuse. Here (above), a sign next to the Neuse River near Cherry Point, N.C., warns people not to swim. Pediatric Resident Dr. Adam Shapiro (right) at the UNC Pediatric Clinics at N.C. Children's Hospital in Chapel Hill, N.C., examines 2-year-old Julian Love's teeth. Shapiro is one of hundreds of North Carolina pediatricians who have been trained to screen infants and toddlers for dental disease, apply fluoride varnish to teeth, and counsel parents on oral health.



PHOTO BY EMILY J. SMITH

after all, relatively easy to do and, if parents were already taking their children to see their medical doctors, didn't it make sense to integrate this preventive care procedure into their current practice?

What emerged was *Into the Mouths of Babes*, a highly successful and unique program currently administered by the Oral Health Section and Division of Medical Assistance of the N.C. Department of Health and Human Services. Since its inception, more than 250,000 preventive dental visits have occurred in North Carolina medical offices. The number of children visiting dental offices also increased during this same period.

"Nobody knew if this would really work," says Rozier, "and there were so many questions associated with it since it had not been tried before. Would physicians do it? If so, how would we train them? Would it prevent cavities and save Medicaid money? Could we improve the quality of life of these children and their families over time? We didn't know the answers, but we knew there was a prob-

lem with access to dental care for disadvantaged families, and so we went about trying to solve it."

Rozier, along with Dr. Sally Stearns, associate professor of health policy and administration at the UNC School of Public Health, and others on the evaluation team, first tackled the question of

Since the inception of *Into the Mouths of Babes* in 2001, more than 250,000 preventive dental visits have occurred in North Carolina medical offices. The numbers of children visiting dental offices have also increased.

whether intensive, in-office training was necessary for high adoption rates of the new procedure by physicians (it wasn't). Then, they looked at whether the new program increased access or merely shifted it from dentists to physicians (the former).

Finally, the team investigated the opinions of parents served by the program. More than 80 percent said they were satisfied or very satisfied with dental visits in medical offices, including how physicians explained the fluoride procedure and other aspects of preventive dental care.

Funding for the project, which now has

been extended to a dozen other states, is provided by the Centers for Disease Control and Prevention, the National Institutes of Health, the Centers for Medicare and Medicaid Services and the Health Resources and Services Administration. ■



Pediatric Resident Dr. Adam Shapiro at the UNC Pediatric Clinics at N.C. Children's Hospital in Chapel Hill, N.C., shows 2-year-old Julian Love the proper way to brush his teeth while Julian's father, Joseph, looks on.

PHOTO BY EMILY SMITH



PHOTO BY WILL OWENS

Eat your fruits and vegetables

For the past 15 years, Dr. Marci Campbell, associate professor of nutrition in Carolina's School of Public Health, has worked on finding the most effective ways to improve nutritional knowledge and eating patterns among minority and economically disadvantaged populations who often face greater challenges than others in eating nutritiously.

Campbell currently oversees two such intervention efforts—*Body & Soul*, a nutrition program working with African-American churches throughout the United States, and *HOPE Works*, a community-based strategy to support, educate and strengthen women in reducing obesity and leading healthier and more fulfilling lives.

The seed for *Body & Soul* began with an earlier project—*Black Churches United for Better Health*—co-directed by Campbell. Project researchers worked with 50 Black congregations in rural North Carolina communities using church activities, pastor involvement and peer counseling to encourage church members to eat more fruits and vegetables. Research has found that African-Americans have higher rates of death from certain cancers (such as colon and prostate) than any other ethnic or minority group in the United States. Studies have also shown that people with low fruit and vegetable intake may have a higher risk of cancer and other chronic diseases than individuals who eat many fruits and vegetables.

While Campbell was working with North Carolina churches to implement *Black Churches United for Better Health*, a colleague, Dr. Ken Resnicow, then with Emory University and now with the University of Michigan, was implementing a simi-

lar program—*Eat for Life*—with several Black churches in the South. The success of these two programs prompted the American Cancer Society to take notice and the Society decided to combine the two programs and test pilot them among churches throughout the country. Thus, *Body & Soul* was born.

The pilot of *Body & Soul* was such a success that the National Cancer Institute (NCI) offered to take the program national, and last year, created a professionally-produced, interactive, DVD-based peer-counselor training program based on the materials created by Campbell and Resnicow. Last fall, the program was launched in major cities throughout the country via promotional spots on local radio stations targeting African-American audiences.

The Centers for Disease Control and Prevention is currently funding research, led by Campbell, to study dissemination and effectiveness among 16 churches ►►

Sharon Brown (above, left), chair of the Duplin-Sampson County Community Advisory Committee for the UNC School of Public Health's *HOPE Works* project, arranges a bucket of eatable fruit art treats at the Sampson County *HOPE Works* project kickoff on July 22, 2006, at the Clinton, N.C., Farmers' Market. Brown is also the chief operating officer of the Tri-County Community Health Center in Newton Grove, N.C., which participated in the kickoff. Darlene Dixon (below), a "Hope Circle Leader" with the UNC School of Public Health's *HOPE Works* project, finishes a praise dance at the Sampson County *HOPE Works* kickoff in Clinton, N.C.

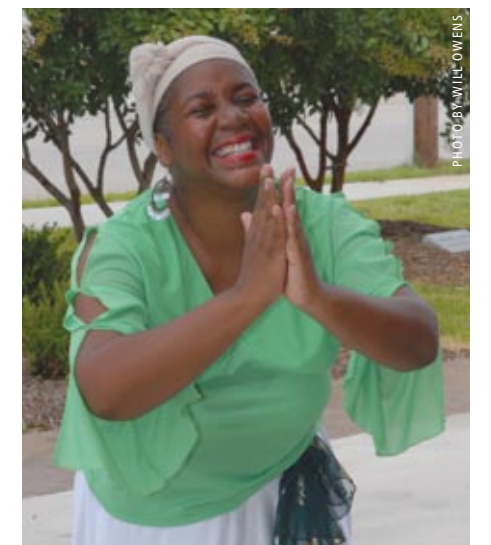


PHOTO BY WILL OWENS



PHOTO BY WILL OWENS

across the country that have requested the *Body & Soul* program from NCI. Respondents have noted that *Body & Soul* has made a difference in their health.

Similarly, *HOPE Works*, a project of the UNC Center for Health Promotion and Disease Prevention, relies on a community-based participatory approach to reduce health disparities among low-income women and their families and communities. However, instead of working strictly through churches, *HOPE Works* uses the power of women's support groups and lay leaders from the commu-

nity to empower women to reduce obesity, increase their hope for the future and thereby improve their lives overall.

"The idea is to build on existing networks within a community to build hope for people who have had very little," says Campbell. "We hypothesize that the self-empowerment approach is really stronger in the long run than having professionals come in and tell people what to do. What's happening is that the people themselves are connecting the dots. They are starting to ask 'what caused our health problems and how do we fix it?'"

A grant from the Centers for Disease Control (CDC) has allowed Campbell, her staff and a very active group of community members in eastern North Carolina's Duplin and Sampson Counties to plan and implement this community-based approach in these two economically-disadvantaged counties.

HOPE Works is implemented by the community women themselves. Women from each community are trained to be *HOPE Circle Leaders* and to conduct ongoing meetings with other women in the community. They learn strategies for managing stress, preventing and controlling obesity, and overcoming barriers to change. They also exercise and prepare healthy foods together. The goal is to encourage one another as they each set up health and life-improvement goals such as completing high school or starting a small business.

While the data on the five-year project are still being collected and analyzed, qualitative data suggest the approach works and that women involved in the project are changing their health behaviors and growing in self-esteem. Campbell and her team hope to show that this approach can also be combined with the micro-enterprise model of home-grown businesses to further empower minority women to take control of their lives. ■



PHOTO BY WILL OWENS

Doris Morales, a *HOPE Circle Leader* with the UNC School of Public Health's *HOPE Works* project, gets her blood pressure and blood-sugar level checked by Tri-County Community Health Center employees at the Sampson County *HOPE Works* kickoff at the Clinton, N.C., Farmers' Market on July 22, 2006.

they make small steps toward meeting the recommendations for healthy eating and physical activity behaviors. To help with exercise data collection, intervention participants also wore "accelerometers"—devices similar to pedometers except they measure both the amount and the intensity of most movements.

Study results surprised Samuel-Hodge. While physical activity improved significantly, the diets of the women did not. Furthermore, getting accurate, self-reported caloric counts proved difficult because many of the women underreported their intakes. Samuel-Hodge also discovered that religious beliefs and practices played a prominent, positive role in women's lives and were related to issues of life satisfaction, coping mechanisms and emotional support. Information gleaned from this research prompted Samuel-Hodge to try a new tactic in her next project.

"People learn where they are most comfortable," Samuel-Hodge notes. "Since people are comfortable in their church, we thought—why not educate them there?"

Thus began "A New DAWN: Diabetes Awareness & Wellness Network," a project of the UNC Center for Health Promotion and Disease Prevention. This 18-month intervention involves more than 200 participants from 24 Black congregations in North Carolina. The project, which ran from February 2001 to August 2003, compared blood sugar levels, diets, physical activity levels, weight changes and self-care practices of participants taking part in the "special intervention group" with those in the "minimal intervention group."

Special intervention group participants had face-to-face meetings with project dietitians, regular group meetings with other study participants, and received monthly phone calls from peer counselors. Those participating in the minimal inter- ➤

Defeating diabetes

Studies by Dr. Carmen Samuel-Hodge, research assistant professor of nutrition in the UNC School of Public Health, have also concentrated on self-empowerment as a tool for change, but with a focus on the management of type 2 diabetes among African-Americans.



Dr. Carmen Samuel-Hodge

With approximately 2.7 million African-Americans ages 20 years or older in the United States living with diabetes and with rates reaching 25 percent among African-Americans ages 65 to 74, Samuel-Hodge has found that breaking through this health disparity requires reaching out to people in a different way.

Her work in this area began more than 13 years ago when she conducted focus groups with 25 diabetes patients from seven North Carolina community health centers to better understand the cultural, ethnic and psychosocial factors influencing self-care behaviors and outcomes.

She sought to understand how much control sufferers felt they had in managing their disease and what skills, knowledge and social supports could help them control their diabetes. Study results indicated that people lacked basic information about the disease including information about the impact of diet on diabetes and the value of exercise in better managing it.

Samuel-Hodge used results from this first study to formulate a second, larger intervention in the mid-1990s, working with 200 female type 2 diabetes sufferers from seven North Carolina community health centers. Study participants were divided into three groups: a control group and two intervention groups. Participants in one intervention group participated in periodic meetings with others in their group to discuss problems managing the disease and met with a project dietitian four times. Those in the second intervention group met with a project dietitian, took part in group meetings and also received 12 monthly phone calls from a peer counselor. Intervention participants set monthly goals to help



PHOTO BY WILL OWENS

Two participants (above, top) in the Sampson County *HOPE Works* project kickoff at the Clinton, N.C. Farmers' Market, on July 22, 2006, dance while others watch with smiles. The word "HOPE" in the *HOPE Works* program name (above) stands for "Health Opportunity Partnership Empowerment." Face painting (right) was one of many activities that entertained both young and old at the *HOPE Works* project kickoff at the Clinton N.C. Farmers' market.

vention group received two health mailings from the American Diabetes Association and three project newsletters with general health information and study updates. Participants in both groups tracked their caloric intakes and their exercise habits.

The extra attention received by those in the special intervention group paid off, says Samuel Hodge. Blood sugar levels of those in this group decreased more than those in the minimal intervention group, highlighting the importance of both health information and culturally appropriate social supports in managing this disease, says Samuel-Hodge.

The UNC School of Public Health works in other ways to help individuals with diabetes live healthy lives.

Dr. Ed Fisher, chair of the UNC School of Public Health's Department of Health Behavior and Health Education, is national program director for the Robert Wood Johnson Foundation's *Diabetes Initiative* that is working with community health centers and primary care practices in 14 disadvantaged communities around the United States.

"Most educated people think that good diabetes care is seeing a specialist, getting medication and being told to lose weight," Fisher says, "but it's really much more than

“Most educated people think that good diabetes care is seeing a specialist, getting medication and being told to lose weight... but it's really much more than that.”

that. Of course, self-management includes taking medicine, maintaining a healthy diet, and being physically active, but it also includes problem-solving skills to put this all together in a busy world that is more conducive to sedentary living and high-fat/high-sugar diets.

"Good care includes regular visits to the doctor and help in setting a management plan, opportunities to learn the skills to follow the plan, ongoing support



Faye Heggie of Fuquay-Varina, N.C., prepares a healthy vegetable dish to help manage her diabetes. Heggie—a member of the St. Augusta Missionary Baptist Church in Fuquay-Varina—participated in the UNC School of Public Health's "A New DAWN: Diabetes Awareness & Wellness Network" project, an 18-month intervention involving more than 200 participants from 24 Black congregations in North Carolina.

and encouragement to help folks stay motivated and help them figure out how to adjust their plans when things aren't working, and community resources such as safe, attractive places to walk—all working together," Fisher says. "Diabetes management is not two hours a year in a doctor's office. People need help with the other 8,764 hours as well."

The program has been launched in rural, urban, and American Indian reservation settings, all serving disadvantaged groups. Inconsistency of care is one of many barriers to effective diabetes self management faced by poor and minority groups.

"These individuals often don't see the same doctor twice and they may have little support at home or in their community," Fisher says. "Fresh fruits and vegetables are often not available in lower-income

neighborhood grocery stores. Walking for exercise to help manage their diabetes may not be an option for them if they live in a high-crime neighborhood."

Community health centers and primary care practices participating in the Diabetes Initiative offer a variety of activities and resources, including "talking circles" (in a Minneapolis American Indian Center), breakfast clubs, exercise classes, walking clubs, group medical visits, social marketing campaigns, cooking clubs, tailored self-management education classes and system changes to health care practices to improve patient-physician communication and goal setting.

The project appears to be working. For example, participants in Laredo, Texas, have reduced their blood sugar levels—indicative of good diabetes control—and maintained those reductions through a combination of group self-management classes and personalized ongoing support from lay *promotoras*.

"A big problem in diabetes management is the number of folks who don't receive care. To accommodate their often complicated lives, we need to provide choices—many 'good practices' rather than a 'best practice,'" Fisher concludes. ■

Caring for Alzheimer's patients

Perhaps no group needs greater help and support than the caregivers of Alzheimer's disease and related dementia sufferers in disadvantaged communities.



Dr. Peggye Dilworth-Anderson

While 4.5 million Americans have been diagnosed with Alzheimer's disease, age-specific dementia among African-Americans is anywhere from 14 to 100 percent higher than among whites.

Dr. Peggye Dilworth-Anderson, professor of health policy and administration at the UNC School of Public Health and associate director of aging and diversity at the UNC Institute of Aging, said that with an aging baby-boomer population and fewer children to act as caregivers, helping disadvantaged families is not a luxury, but a necessity.

"This is a sobering disease," says Dilworth-Anderson, "and most families are ill-prepared to deal with it. This is especially true in poor and rural populations that have limited healthcare access. Often, the diagnosis is made in the middle or late stage of the disease when there are significant behavioral issues and difficulties in sleeping, eating and bathing. People are strapped to take care of the individual, and by this time the family is in great distress. There are profound physiological and psychological effects on the caregiver that we're only now beginning to understand."

An ongoing intervention designed and conducted by Dilworth-Anderson provides crucial education and information to caregivers of poor, rural and medically underserved elders in North Carolina.



Members of the Coharie Indian Tribe in North Carolina were some of those who participated in "Train the Trainer: A Dementia Care Program" developed and implemented by UNC School of Public Health researchers and funded by the GlaxoSmithKline Community Partnership Program. These participants included (front row, left to right): Brandy J. Brewington, Marie B. Whitehead, Marie B. Faircloth and Carol S. Brewington. Middle row (left to right): Sadie B. Barbour (the trainer), Arlene S. Faircloth, Lois J. Torres and Sue B. Brewington. Back row (left to right): John S. Taylor and Juanita B. Brewington.

Train the Trainer: A Dementia Care Program, funded by the GlaxoSmithKline Community Partnership Program, has trained community-based individuals in 13 counties (Beaufort, Bertie, Bladen, Greene, Harnett, Hertford, Hoke, Jones, Martin, Richmond, Robeson, Sampson and Scotland) to conduct six-hour training classes for caregivers. The classes focus on topics such as normal aging processes, identifying dementia symptoms and developing caregiving skills and strategies.

Approximately 300 African-American, American Indian and white caregivers have participated in this ongoing program. Early results show improved awareness and knowledge about dementia among caregivers upon completion of the training sessions, but note that there is a continued need for such intervention efforts in both North Carolina and other areas of the United States.

"Medications can help manage the disease in the early stages, but there's currently no way to stop it," says Dilworth-Anderson.

In other research funded by the National Alzheimer's Association, Dilworth-Anderson is studying how factors such as culture, geography and family dynamics influence how disadvantaged families perceive and give meaning to dementia.

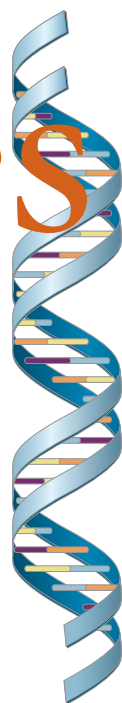
In this study, a UNC research team is conducting two-hour family group meetings with individuals caring for African-American, white and American Indian Alzheimer's sufferers in North Carolina to collect information on how caregivers cope with providing care and access services to support their caregiving efforts.

Early findings from discussions with 84 caregivers in 25 families show that caregivers rely largely on five strategies to manage stress: humor, faith, preempting conflict with the care recipient, seeking support and disengaging from the care recipient. Very few of the caregivers know what services are available to support them and how to seek the best medical care for their loved ones.

"This is important information that will help us design better intervention strategies for caregivers who typically must shoulder the burden of this disease's devastating effects," Dilworth-Anderson says. ■

unraveling Unraveling Disparities

disparities



UNC researchers uncover perplexing questions about how race and ethnicity affect health, and develop new tools to help tackle health disparities

BY KATHLEEN KEARNS

Heart disease, cancer and cerebrovascular diseases (including stroke) are the three leading causes of death in the United States. All three are more common among African-Americans and Hispanics than whites, according to the Centers for Disease Control and Prevention (CDC). African-Americans also have the highest mortality rate of any race and ethnic group for all cancers combined and for most major cancers.

Health disparities like these pose a critical public health challenge. Uncovering why different racial and ethnic groups have different rates of disease and different disease outcomes is the first step toward developing methods of prevention and treatment that will both erase these disparities and improve health for everyone.

To meet this challenge, UNC School of Public Health researchers have for many years conducted a broad range of projects to investigate and overcome specific health disparities, including the top five killers reported by the CDC, as well as obesity, reproductive health

and violence-related injuries and deaths.

"Disparities are profoundly important in terms of longevity, healthcare costs and quality of life," says Dr. Jay Kaufman, associate professor of epidemiology at the UNC School of Public Health and a fellow at the Carolina Population Center. "The risk of preterm birth among African-Americans in North Carolina is double that of whites. It's our natural role to respond to exactly that kind of situation and to ask, what's the underlying cause of this disparity? Whatever it is for African-Americans is at play for the majority population as well."

Researchers at the School who investigate health disparities are driven by a desire to better understand what causes disease and death and by a fundamental belief in fairness. Most of all, they want to discover answers that will lead to better health for people of all races.

"It is always important to be inclusive, to study everyone," says Dr. Robert Millikan, associate professor of epidemiology in the UNC School of Public Health, member of the UNC Lineberger Comprehensive Cancer Center and director of the North Carolina Center for Genomics and Public Health. "To date, observational studies and certainly clinical trials have neglected breast cancer in younger African-American women. This failure on our part to adequately address breast cancer in the entire U.S. population has resulted in marked health disparities and missed opportunities for finding cures."

UNC School of Public Health researchers are sensitive to the importance of differentiating between disparities that are fundamentally genetic and those influenced by social, cultural or economic characteristics that could be altered. Identifying those patterns, however, can be a complex undertaking.

Theresa Cruz, a doctoral student in epidemiology at the School who studies the relationship between acculturation and violent death among Hispanic youth in the United States, points out that rates of violence among young Hispanic immigrants are clearly not rooted in biology. "There's no inherent risk in being Hispanic," she ►►

Uncovering why different racial and ethnic groups have different rates of disease and different disease outcomes is the first step toward developing methods of prevention and treatment that will both erase these disparities and improve health for everyone.



PHOTO BY LINDA KASTLEMAN

says, “or the rates of violent death among Hispanics in the United States would be similar to those in Latin American countries.”

Her research explores how the process of adapting, or “acculturating,” to American culture affects rates of physical assault and suicidal behavior among young Hispanics. Using National Longitudinal Survey of Adolescent Health data, she is looking at sociocultural factors that may explain why violence rates shift as Hispanics acculturate.

“In the long run, we want to be able to prevent these deaths, so we look at patterns, analyze them and open up avenues for prevention,” she says. “For me, that’s the whole point of public health: to find patterns and prevent deaths.”

Awareness of the importance of non-biological factors has prompted researchers at the School to develop better methods for understanding health disparities. Kaufman, for instance, is investigating differences in pregnancy outcome by carefully defining racial and ethnic subgroups. By analyzing Puerto Rican immigrants separately from American-born residents with Puerto Rican ancestry, for example, he can take into account neighborhood, social, economic and other factors. His colleague, Dr. Amy Herring, associate professor of biostatistics at the School, has developed innovative statistical methods for this project that help describe the complex joint effects that socioeconomic indicators have in various racial subgroups.

Dr. Gerardo Heiss, a UNC epidemiology professor who studies heart disease and stroke, notes that the interdisciplinary make-up of his research group allows them to consider whether some racial differences in their findings may in fact have more to do with socioeconomic or cultural attributes than with race. “It’s a matter of stepping outside of biology,” he says. Because UNC faculty are collaborative and work in teams, they are better positioned to find answers to important questions.

The examples that follow illustrate the wide range of approaches that researchers at the School are taking to address health disparities and improve public health. ■

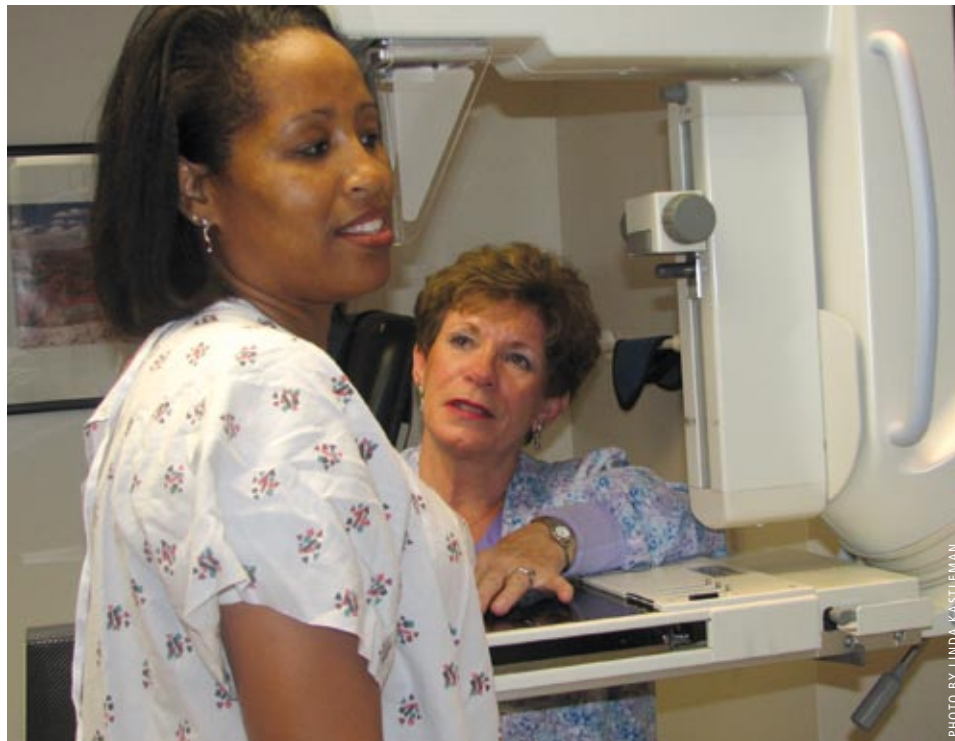


PHOTO BY LINDA KASTLEMAN

A Breakthrough in Breast Cancer: The Carolina Breast Cancer Study

For many years, breast cancer in younger African-American women has been a significant, understudied public health problem. These young women get breast cancer more often than both white women and older Black women, and their prognosis tends to be worse. Yet, the situation had not been addressed.

Dr. Robert Millikan, associate professor of epidemiology at the UNC School of Public Health, member of the UNC Lineberger Comprehensive Cancer Center and director of the North Carolina Center for Genomics and Public Health, and his colleagues recently made a discovery that adds important information to this complex puzzle. In the June 7, 2006 issue of the *Journal of the American Medical Association*, the authors reported that young Black women were more than twice as likely as older Black women or white women to get basal-like breast tumors, a type of breast cancer with a poor prognosis.

“We found a higher frequency of a type of breast cancer that does not respond to traditional forms of treatment,” Millikan says. “And we found a lower frequency of the types of breast cancer that do respond. The basal-like form of cancer is harder to treat because it lacks targets for the agents commonly used to treat breast cancer. We need clinical trials to identify new treatment approaches. Since basal-like breast cancer is found in all

women, all women will benefit from this new knowledge. It is important, however, that clinical trials now focus on younger African-American women because they are the ones who are suffering the most.”

This fundamental, potentially revolutionary breakthrough resulted from analysis of the large amount of data collected for the Carolina Breast Cancer Study, a population-based, case-control study involving UNC faculty from the Lineberger Comprehensive Cancer Center, the School of Public Health and the School of Medicine. Millikan has led the project since 1999. Researchers involved in the study, which has led to more than 60 papers published thus far, collected data on 4,000 women—half of them African-American—from 24 North Carolina counties between 1993 and 2001.

“The general findings are that breast cancer is not one disease but many diseases,” Millikan says. He and his colleagues used the new tools of molecular biology—including diagnostic tools developed in large part by Dr. Charles Perou, assistant professor of genetics, pathology & laboratory medicine in the UNC School of Medicine—to differentiate tumors according to how the cells grow and use molecular signals to form tumors. They also have learned that genetic, ►►

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UNC researchers have found that young Black women are more than twice as likely as older Black women or white women to get basal-like breast tumors. Researchers are now working to uncover the reasons for this disparity.

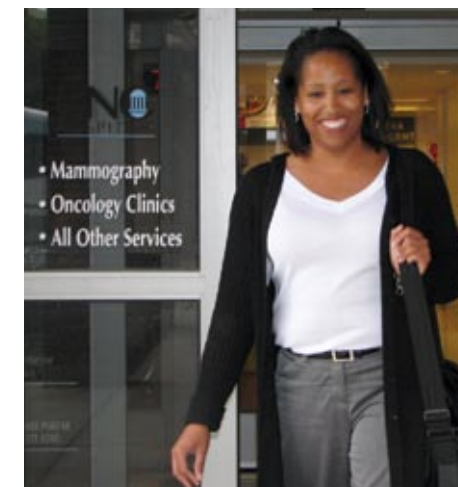


PHOTO BY LINDA KASTLEMAN

EXPLORING the causes of health disparities

The UNC School of Public Health’s explorations into the causes of health disparities and the ways that race and ethnicity affect disease are long-term and far-reaching. Our work in this area extends from studies investigating diet and physical activity changes in developing countries to explorations of the way stress affects health. Read on to learn more.

Are you what you eat?

Studies show that oxidative stress may be related causally to the incidence of many chronic diseases, including cancer, and consumption of antioxidants may reduce oxidative stress levels. Cancer rates are also generally higher in African-Americans compared to whites. Dr. Jessie Satia, assistant professor of nutrition and epidemiology and special



assistant to the dean for diversity at the School, is trying to learn whether people’s eating habits affect the levels of oxidative damage in their bodies. With an “antioxidant nutrient questionnaire,” she is collecting self-reported information from study participants (which include African-Americans and whites) on what they eat. To validate the antioxidant nutrient questionnaire, she is also collecting information on her study participants’ eating habits via phone interviews and is collecting blood samples from participants to measure the levels of antioxidants in their blood. With this study, she hopes to discover how well the nutrient questionnaire measures people’s eating habits and find out if African-Americans in her study have higher levels of oxidative damage in their blood and lower antioxidant intakes than whites. ►►

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environmental and social risk factors interact to cause breast cancer, and they continue to mine the rich Carolina Breast Cancer Study data source to determine exactly how.

“We are studying stage-at-diagnosis, treatment, type of breast cancer, socioeconomic status, rural versus urban residence and other factors that may influence breast cancer prognosis,” he explains. Because younger African-American women have a higher frequency of basal-like breast cancer than older African-American women, he points out, broad environmental factors must play a role. “Our unpublished data suggest that a lower frequency of breast-feeding, combined with a larger number of children, as well as higher levels of overweight, may contribute to the increased risk of basal-like breast cancer in younger African-American women,” he says.

The team now is studying the possible role of low-level radiation, smoking, diet and other environmental exposures in breast cancer development. “We are studying genes that influence DNA repair and other responses of the body to these environmental exposures,” Millikan says. “And we are studying how lifestyle variables such as jobs and where one lives, and social factors such as social support and socio-economic status influence breast cancer progression.”

Once their findings are validated in other populations, they can be translated into better care and access to clinical trials for all women with breast cancer, Millikan says. “African-American women—like all breast cancer patients—need the best possible diagnostic workups and access to the latest clinical trials,” he says. “Epidemiologists need to pay particular attention to minority women because they have been underserved.” The results of the study probably could not have occurred without teams that included epidemiologists, geneticists and oncologists. Together, they not only examined data but determined how the lives of individual women were being affected. ■

Margarite Lathe contributed to this report.

Evaluating Multiple Risks: African-Americans and Head and Neck Cancer

If you're a smoker with a certain genetic constitution, are you more susceptible to head and neck cancers, because you're less able to metabolize compounds and repair damage from tobacco smoke?

That was one of the questions that UNC epidemiology professor Dr. Andrew Olshan wondered about when beginning his investigations into whether interacting genetic and environmental factors can increase one's risk of head and neck cancers.

In a large, population-based study of oral, pharyngeal and laryngeal cancers funded by the National Cancer Institute, Olshan now is looking to answer that question and others. Using the same gene-environment approach his colleagues have taken with breast and colon cancers, Olshan hopes to tease out the different causes of head and neck cancers. His study is the largest in the United States relating to head and neck cancers.

To date, Olshan has collected data in 46 central and eastern North Carolina counties by recruiting 1,385 patients with newly-diagnosed cases of oral, pharyngeal and laryngeal cancers and an equal number of cancer-free controls. Nurse interviewers have spoken with patients in their homes—taking histories of smoking, drinking and diet habits and obtaining blood samples from which DNA will be extracted to look for genetic mutations called polymorphisms.

“Cancer and many other diseases tend to run through families,” Olshan explains. “One genetic susceptibility factor is an inherited gene mutation that is very rare in the general population, but if you have it, your risk of disease is very high. We're interested in another kind of genetic mutation that is much more common in the general population but carries a lower risk of cancer.”



Dr. Andrew Olshan

With cancer and some other diseases, this second type of mutation, a polymorphism, is thought to depend on environmental exposures. It interacts with such things as cigarette smoke, alcohol or elements in the work environment. Olshan hopes his study will zero in on polymorphisms involved in the metabolism and repair of genetic damage from cancer-causing compounds in tobacco and alcohol.

He also aims to understand why African-Americans are more likely than whites to develop head and neck cancers and almost twice as likely to die from them. “We want to know what might explain that,” he says. “Not genetic factors so much as patterns of smoking and drinking, cigarette brands, socioeconomic factors, access to health care, and so on.”

With funding from the UNC Lineberger Comprehensive Cancer Center, Olshan is also looking at the cancer patients in his study for clues about what might predict survival. He plans to analyze tumor sections and data on comorbid conditions, such as heart disease and diabetes, exposure factors, disparities in access to health care and other medical and treatment information. He's also collecting information on survivors' quality of life.

“Head and neck cancers can have very disfiguring and debilitating treatment,” Olshan says. “Treatment can affect swallowing, breathing and one's ability to speak—so there are big quality of life issues.” Presently, nothing in the scientific literature explores African-American head and neck cancer survivors' quality of life, Olshan notes. He hopes additional funding will allow him to research this issue too. Support for studies of survivors is often difficult to obtain. ■

UNC researchers hope to uncover why African-Americans are more likely than whites to develop head and neck cancers and almost twice as likely to die from these diseases.

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Excess weight & disease incidence



Dr. June Stevens

Does obesity have more harmful effects on some ethnic groups than others? That's a question Dr. June Stevens wants to answer. Using data from Atherosclerosis Risk in Communities (ARIC) and from the People's Republic of China Study, Stevens is comparing weight and rates of diabetes, hypertension and hyperlipidemia among African-Americans, American whites and Chinese.

Studies have repeatedly shown that, on average, at the same height and weight, Chinese men and women tend to have more fat tissue and less muscle tissue than whites and

Blacks. Whites tend to have more fat and less muscle than Blacks. Stevens is investigating whether these differences translate into differences in the effect of obesity on the risk of heart disease. “Some policy makers have proposed that the ethnic differences in body composition indicate that guidelines for healthy body weight should differ among ethnic groups,” says Stevens. “However, we believe that a deeper understanding of the associations between body composition, ethnicity and heart disease risk is needed before different standards are proposed.”

Obesity development & cardiovascular disease risk among Filipino women & their offspring

Understanding the factors influencing weight gain and cardiovascular disease among women from randomly selected urban and rural communities in Metro Cebu, Philippines during a period of rapid socioeconomic and dietary change, has been a long-term project of Dr. Linda Adair, professor of nutrition at the UNC School of Public Health.

This 21-year study has followed more than 2,100 adult women, collecting height, weight, skin-fold and blood pressure measurements at various intervals as well as information about diet and daily activities. Adair found that the prevalence of overweight and obesity rose from 5 percent in 1984 to nearly 43 percent in 2005 among women who were under 60 at the time of the 2005 project survey. Fewer than half a percent of these women were obese in 1984, however by 2005, ten percent ➤



A 21-year UNC nutrition study of 2,100 Filipino women in Metro Cebu, Philippines, found that the prevalence of overweight and obesity rose from 5 percent in 1984 to nearly 43 percent in 2005 among women under 60. Changes in diet and physical activity are influencing these weight gains.

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UNC researchers are developing interventions to help women maintain a healthy weight throughout their childbearing years. Their work involves exploring barriers and motivations affecting what women eat and how much they exercise during pregnancy and the postpartum period.

Gaining Understanding about Weight During Pregnancy & Postpartum

Dr. Anna Maria Siega-Riz, associate professor of epidemiology and nutrition at the UNC School of Public Health, seeks to understand what behaviors are associated with weight gain and weight loss during pregnancy and the postpartum period. Her goal is to develop interventions to help women maintain a healthy weight throughout their childbearing years. In so doing, both the mothers and their children will be healthier.

Although her work doesn't focus specifically on racial and cultural differences, Siega-Riz has nevertheless found that some health behaviors vary by race. "White women are more



Dr. Anna Maria Siega-Riz

likely to breast-feed than African-American women and for longer," she says. "And African-American women tend to retain more weight gained during pregnancy than white women."

Her colleague, Dr. Peggy Bentley, professor of nutrition and associate dean for global health at the School, is also seeing differences in infant feeding characteristics in her research: African-American mothers are more likely to introduce cereal earlier than white mothers.

Siega-Riz' project is part of a larger collaboration, the Pregnancy, Infection and Nutrition Study, in which researchers in the UNC Schools of Public Health and

Medicine are investigating the causes of preterm birth, growth of the fetus and pregnancy complications like gestational diabetes. She has used focus groups that include people of different races and weights to find out what barriers and motivations affect what women eat and how much they exercise during pregnancy and the postpartum period. "There were probably more differences by BMI (body mass index) than by cultural preference, except for the Hispanic group," she notes. Immigrant Hispanic women reported that once they moved to the United States, they found it difficult to eat fresh foods and be physically active because the environment doesn't support either.

"The high-BMI women, both Caucasian and African-American, found the environment important," she says. "These women were low-income, they lived in environments that were very heavily populated by fast foods, and that influenced what they ate. They worked all day, and when they came home, they went for something quick and easy." Her focus groups also challenged the perception that African-Americans are more accepting of being heavy, she says. "We saw the same comments among white high-BMI women," she adds.

In talking about her research, Siega-Riz notes that in dividing, or "stratifying," by race in any given study, researchers are not necessarily looking for biological or genetic differences. "As a reproductive epidemiologist, when I stratify by race, I'm really trying to find cultural differences, such as eating behaviors or physical activity patterns, that may help explain the differences in health outcomes," she says, "but this always depends on the research question at hand."

Still, Siega-Riz has learned that cultural differences aren't always key. In fact, she has found these differences had less impact on pregnant women's exercise habits than another factor: having a partner willing to be physically active with them at their level—such as having another pregnant woman with whom they could walk. ■

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were obese, having a Body Mass Index (BMI) greater than 30. BMI is an indirect measure of body fatness calculated from height, weight.

The socioeconomic shifts influencing weight gains in the Philippines are similar to those happening globally: Jobs are becoming increasingly sedentary due to continued advances in technology; people are expending less energy doing normal daily activities; and diets are changing. In many countries, including the Philippines, the lowered cost of cooking oil has resulted in people adopting more high-fat diets.

"The pattern of obesity that develops in this Asian population is one of 'central obesity,' marked by a high waist-to-hip ratio—indicative of more abdominal fat," Adair says. "The combination of obesity and high waist-to-hip ratio continues to contribute to risk of hypertension in this population."

Of particular interest is that in Filipino women, risk of hypertension is increased at a lower BMI than in Caucasian and African-American women, leading some researchers and health care experts to suggest that the cut-off point to define overweight should be lower in Asians.

"Some have suggested using a BMI of 23 instead of 25 to define elevated risk in Asians," Adair notes. This is important, since past approaches to BMI standards have been more of a "one size fits all" approach.

Adair recently was awarded funding from the National Heart, Lung, and Blood Institute to study how obesity, central fat patterning, and weight gain history relate to blood pressure, insulin resistance, and serum lipid profiles in this cohort of adult women.

Additionally, she will be comparing clustering patterns for these risk factors among mothers in the Cebu group and one of their young adult offspring. A unique feature of this study is 21 years of health history data on two generations, along with blood samples taken from mothers and young adult offspring in the 2005 survey that will allow researchers to look for genetic markers for health conditions such as obesity, hypertension, high cholesterol and diabetes. Together, what is learned from Adair's study benefits not just the people of Cebu but people around the world.

Racial differences in prostate cancer risks and outcomes

Black men have a significantly greater chance of being diagnosed with and dying from prostate cancer than white men, and rates in the Southern United States are among the highest in the world. UNC researchers are exploring why.

Dr. Paul Godley, adjunct associate professor of epidemiology and biostatistics at the UNC School of Public Health and associate professor of hematology and oncology at the UNC School of Medicine and director of the UNC Program on Ethnicity, Culture and Health Outcomes (ECHO), has explored differences between African-Americans and whites in nutritional risk factors for prostate cancer and in survival rates after ►►

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Perspectives on Heart Disease and Stroke: Atherosclerosis Risk in Communities

Rates of heart disease and stroke vary by race and ethnicity—and also by age, region, behavior, lifestyle and a number of other attributes. Unlocking the reasons would solve one of the conundrums facing researchers working on the Atherosclerosis Risk in Communities (ARIC) Study, a project coordinated by UNC School of Public Health Biostatistics Professor Dr. Lloyd Chambless. The study tracks variations in cardiovascular risk factors, medical care and disease rates by race, gender, location and date. Explaining the reasons for these differences would be a major step in developing better ways to prevent and beat heart disease and stroke.

For two decades, nine collaborating universities have followed nearly 16,000 men and women initially aged 45 to 64 from defined populations within four communities in Maryland, Minnesota, Mississippi and North Carolina. Each participant has received four physical exams so far, says UNC School of Public Health Epidemiology Professor Dr. Gerardo Heiss, a princi-



The Atherosclerosis Risk in Communities study tracks variations in cardiovascular risk factors, medical care and disease rates by race, gender, location and date. Nine collaborating universities, including UNC, have followed the health status of nearly 16,000 men and women for two decades now.



Dr. Lloyd Chambless

pal investigator for the study. “We contact them yearly by phone for information on their health status and visits to physicians,” he says. “We’re still in touch with 93 percent of the survivors of the original cohort.” Researchers also gather data on the community-wide occurrence of heart disease and stroke among those aged 35 to 74 in each study area.

The massive amount of information from ARIC has yielded enormous insights, produced over 450 articles to date, and led to many presentations at national and international scientific conferences and meetings. Recently, the National Heart, Lung and Blood Institute extended the project’s funding through 2012.

Among the findings: ARIC investigators have found that individuals with “metabolic syndrome” have a higher degree of hardening of the arteries and a higher frequency of coronary heart disease than the general population. Metabolic syndrome represents a combination of blood chemistries, abdominal obesity and elevated blood pressure that is related to defects in the ability of insulin to work in the body, which can lead to a high risk for development of diabetes and cardiovascular disease.

ARIC investigators have reported that the extent and severity of gum disease is linked to hardening of the arteries, and recently have expanded on these results by measuring the antibodies to microbes that colonize the mouth and cause gum disease. The level of these antibodies also is related to hardening of the arteries, providing evidence of the role of infection and chronic inflammation in the processes that can lead to strokes and heart attacks. Also, investigators have found reduced kidney function (estimated from blood measurements) in ARIC participants with more extensive and severe periodontal disease.

Although not designed to distinguish race from other attributes, the study has turned up racial differences in both risk factors and disease rates.

Heiss cautions, however, that “it’s difficult to separate race from socio-economic status since a larger proportion of minority individuals in the study are less well off generally than the majority population.”

“Disentangling these attributes has to be done with a great deal of deliberation and trepidation,” Heiss says. “The literature is rife with statements about attributes by color of skin that may well be attributed to how we live, our level of education and the kind of neighborhood networks that make up our social support.”

“In many ways,” he says, “we’re trying to catch up from years of wasted effort



Dr. Gerardo Heiss

attributing to race things we didn’t bother to look into more deeply, possibly because so many with medical training lack the sociological and social-psychological skills to be aware of this and to formulate inquiries along these lines. So perhaps we’ve attributed to biology things that have deeper roots in society, culture and history rather than in one’s genes and blood pressure.”

The logical response to this insight, Heiss says, is a methodologically innovative interdisciplinary approach—one that the ARIC study teams are well equipped to undertake. “We’re fortunate to have a wide range of disciplines among our investigators,” he says. “We have sociologists, physicians, psychologists, basic scientists, chemists, mathematicians. That’s helped the study and many other studies comparably equipped to achieve critical mass in interdisciplinary thinking. The study questions become more inquisitive and better formulated. A multidisciplinary, wider-reaching perspective is probably what leads to innovation. At least, that’s what we hope for.” ■

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prostate cancer treatment. Currently, he is testing the hypothesis that racial disparities in prostate cancer mortality are associated with disparities in the diffusion of state-of-art treatments and examining whether there are racial differences in the efficacy of PSA screening for prostate cancer. The PSA (prostate-specific antigen) blood test is the one most commonly recommended for the purpose of screening for prostate cancer.

Psychosocial stress & the risk of uterine fibroids

UNC School of Public Health researchers are exploring whether there is a connection between stress and the development of uterine fibroids, one of the most common benign tumors among women of childbearing age. Although many women do not experience adverse symptoms with their fibroids, some have heavy menstrual bleeding, pain and bladder pressure.



Dr. Anissa Vines

African-American women have a two- to nine-fold higher risk of either being diagnosed with fibroids at a younger age or having larger, more advanced fibroids than white women. Using data from the National Institute of Environmental Health Sciences’s Uterine Fibroid Study as well as the Perceived Racism Study—an ancillary study to the Uterine Fibroid Study—Dr. Anissa Vines, research assistant professor of epidemiology at the School and associate director of the Ethnicity, Culture, and Health Outcomes (ECHO) Program, is examining the association between fibroids and psychosocial stress, perceived racism and urinary cortisol—a biomarker of stress. Knowing more about the causes of fibroids could lead to better methods to prevent and/or treat them.

Exploring worldwide changes in diet and physical activity

Obesity levels are rapidly increasing worldwide and consequently, so are diabetes, cardiovascular disease and cancer. Much of the blame lies with increases in high-fat and high-sugar diets along with decreases in physical activity on a global level, says Dr. Barry Popkin, professor of nutrition in the UNC Schools of Public Health and Medicine who heads the UNC Interdisciplinary Obesity Center. Popkin studies the “nutrition transition,” a way of looking at the stages of how populations eat, how active they are, and how these patterns shift over time. (See www.nutrans.org.)

Changes in diet, activity levels and rates of non-communicable diseases are taking place not just in wealthier countries, but also among poor populations in developing countries, Popkin says. “Diabetes and obesity are adding to the global health disparity facing the poor,” he says. “Underlying global forces are at the heart of these changes. Technological changes have reduced physical energy expended at most activities; the ‘fresh market’ in developing countries is being replaced by supermarkets with processed foods; global agricultural policies have led to cheaper caloric sweeteners, vegetable oils and animal-source foods which tend to result in higher-fat diets; and mass media access has expanded to increasing corners of the developing world.”

— By Kathleen Kearns

WORKING *with* COMMUNITIES to overcome HEALTH DISPARITIES

BY EMILY J. SMITH

Working with and within communities is an integral part of the UNC School of Public Health's efforts and long-term commitment to eliminate health disparities. Since our School's inception in 1940, our students and faculty have engaged with communities across North Carolina and around the world to achieve this mission.

The timeline on page 48 is a graphic example that illustrates just how long Carolina's School of Public Health has been engaged in an all-out effort to overcome health disparities. That work continues, as we illustrate here.

Mississippi project enlists community to examine social and environmental causes of health disparities

The idea for the Jackson, Mississippi Scientific Roadmap to Health Equity Project began at an American Public Health Association (APHA) meeting in 2000, says Dr. Vijaya Hogan, the project's principal investigator and a clinical associate professor of maternal and child health at the UNC School of Public Health.



Dr. Vijaya Hogan

"A group of scientists from NIH, CDC and academia were discussing the national process to address health disparities and agreed that there needed to be a more systematic approach," Hogan says. "So we decided to apply the 'road-map' process to map where we are now, develop an understanding of the state of the science, and map a course of action detailing how to get to a state of *health equity*."

"We also really wanted to work directly with a community to ensure that the process did not become just an academic exercise, but would directly benefit people right away," Hogan says.

Jackson was chosen because incidence rates of diabetes, obesity, hypertension and infant mortality (as well as other public health indicators) among the city's African-American residents exceed both the national averages and the rates for their white counterparts. The project was funded by the Kellogg Foundation with support from the Centers for Disease Control and Prevention.

"Our original goal was to engage various members of the community in an interdisciplinary dialogue about health disparities, but what we found out when we began working with the community was that most people had no clue what 'health disparities' meant or what the implications of health disparities were."

So the project conducted surveys and focus groups that included both academic professionals and people in blue-collar and white-collar positions in the Jackson community. ►►



PHOTO BY DR. FLETA JACKSON



PHOTO BY DR. FLETA JACKSON

Dominica Sheriff (top photo) coordinates the registration table for the Jackson Roadmap to Health Equity Community Conference at Tougaloo College in May 2004. The conference was a collaborative event in which researchers and members of the Jackson, Miss., community worked together to develop a plan of action to eliminate health inequities in Jackson. Mary Cross (bottom photo), a Roadmap Community Steering Committee member for the Jackson, Mississippi Scientific Roadmap to Health Equity Project, speaks with a Jackson community member at the Jackson Roadmap to Health Equity Community Conference.



PHOTO BY DR. PAMELA RAO



The groups were asked to complete the following phrase: ‘A specific thing that causes African-Americans to get sick and die sooner than other people is...’”

“We found that for the most part, people believed health disparities were caused mostly by adverse health behaviors, lack of health care and to some extent genetics,” Hogan says. “Some, but not many, noted the underlying social and environmental things that affect health disparities, including the stress of living with institutional racism.”

Research has found that low-resource neighborhoods, where poorer people live, often have fewer grocery stores (where residents can buy fresh fruits and vegetables) than higher-resource neighborhoods. As one of our faculty members, Dr. Penny Gordon-Larsen, associate professor of nutrition, has shown, these neighborhoods have fewer exercise facilities.

“There are reasons why people don’t practice healthy behaviors,” Hogan says. “Lack of knowledge may be one part of the equation for some, but many people simply do not have the time, resources or the environmental supports needed to practice healthy behaviors.”

An outgrowth of this first phase of the project—which ran from December 2001 through March 2006—has been the development of a “Community Steering Committee” made up of local clergy, members of church health ministry programs, heads of neighborhood associations, environmental justice advocates, business owners, HIV activists, and even a police captain and a nurse.

Hogan and the steering committee identified four pilot projects they plan to implement in Jackson during a proposed second phase to the project. One of those pilots involves working with a Jackson school district to develop a “Healthy School Initiative Plan”—a new U.S. government requirement for all U.S. school districts. Jackson is unusual in that it includes an authentic community partnership in the development process.

The steering committee also will work with an elementary, middle and high

school to help them develop and implement a plan to incorporate physical activity into the school-day and provide healthier food in the schools.

“Obesity in children is a huge problem in Mississippi,” Hogan says. “Kids are in school six hours a day and then they have homework in the evenings. All of these are sedentary activities. And recently, physical education was taken out of these schools

to create more academic time because the students were under-performing in reading, writing and arithmetic.

Ultimately, the steering committee plans for this school-based pilot to create a structure to make change in the schools. Hopefully, parents, students and teachers can use the structure to help tackle future issues affecting the health and well-being of community members. ■



Does childhood obesity start with babies? Mothers’ styles of feeding and playing could affect risk

How and when does obesity in children begin? This is a question under exploration by Dr. Peggy Bentley, associate dean for global health and professor of nutrition at the UNC School of Public Health, along with Dr. Linda Adair, professor of nutrition, and other colleagues at UNC.



Dr. Peggy Bentley

Bentley and colleagues are working with 217 first-time African-American mothers in North Carolina’s Durham and Wake Counties and studying their feeding and parenting styles. They hope to gain an understanding of the environmental, family and parenting factors that lead to risk of pediatric obesity.

“Obesity in children is an epidemic problem in our country,” Bentley says, “and research has shown that minority populations are at greatest risk. However, children don’t just become fat at age seven. There’s something else going on before then. There’s a story to be told there. What’s the contri-



Obesity in children is epidemic in the United States, with minority populations being at greatest risk. UNC School of Public Health researchers are studying when obesity in children begins by looking at the ways that parents feed and interact with their infants.

bution of parenting and care? What’s the contribution of feeding and diet? What’s happening with the television set?”

In this five-year study funded by the National Institutes of Health (NIH), Bentley and colleagues visit each mother and infant pair in their homes five times throughout the course of the project. On each visit, researchers videotape the mother feeding the child and also the mother and child playing together. (In homes where grandmothers or fathers do 50 percent or more of the feeding of the infant, these family members also participate in the study.) They also have the mother or other caregiver fill out a questionnaire related to diet, activity, food shopping, meal patterns and other relevant issues.

“One of the things we are investigating is how many televisions are in each house and whether feeding is going on while the televisions are on,” Bentley says. “We are also asking the mothers if their infant or toddler watches television. There’s really very little data about the impact of television watching on obesity in children, but our preliminary data do suggest that it begins even in the first months of life.”

Infants are followed from three months to 18 months. Detailed dietary intake and physical activity information is collected on both infants and mothers, as are body composition measurements. Researchers are also accessing maternal self-esteem and depression to see how they may influence care and feeding. Additionally, the study, which ends in 2007, is using tools

to assess infant developmental stage and temperament.

Mothers in the study are categorized according to their feeding “style”—categories that include “pressuring,” “restrictive,” “laissez-faire” and “responsive.”

“The ‘laissez-faire’ style seems to result in the introduction of unhealthy foods very early, like potato chips and soft drinks, while the ‘restrictive’ and ‘pressuring’ styles may interfere with the infant’s ability to self-regulate,” Bentley says. “Responsive feeding is the ideal. This is a mother who is very interactive with her child during feeding. She is paying attention to her child’s hunger and satiation levels. She is providing physical help for the child to eat when the child is very young, but as the child begins to develop motor skills, she allows the child to explore his ability to feed himself and to try different tastes and textures of food.” ■

Providing ‘A New Leaf’ to teach activity and nutrition skills

Counseling patients to be more active, eat better foods, quit smoking and maintain a healthy weight is no easy job, especially in disadvantaged communities where access to health care and health information often is limited. Health care providers, lay health advisors and nutritionists need effective tools, which UNC School of Public Health researchers are providing in parts of North Carolina and fourteen other states.

It’s all part of “N.C. WISEWOMAN,” a project funded by the Centers for Disease Control and Prevention and administered through the N.C. Department of Health and Human Services.

The tools were developed by Dr. Alice Ammerman, director of the UNC Center for Health Promotion and Disease Prevention along with Center staff. Ammerman is a nutrition professor at the UNC School of Public Health. Titled “A New Leaf—Choices for Healthy Living,” the tools contain modules on the different health topics, tips for eating healthy and keeping active, and materials to help providers counsel ►►

UNC Nutrition Professor Dr. Carmen Samuel-Hodge (right) trains Juanita Madison (left) and Deborah Coulter (center) of Wilmington, N.C., to use resistance bands for strengthening arm muscles. The women were community health advisors for a 2002-2004 study of the effectiveness of the N.C. WISEWOMAN project in reducing the risk of heart disease among study participants in Wilmington.



PHOTO BY BEVERLY GARCIA

and set lifestyle goals with patients.

“The New Leaf intervention is an assessment and counseling tool that makes it easy for health care providers who don’t know much about nutrition or physical activity to work with patients to reduce their risk of chronic disease,” Ammerman says. “Both physicians and lay health advisors are highly respected in communities; however, they don’t always know a lot about nutrition or physical activity, or have the resources to talk to patients about these things.”

These materials are now being used by more than 40 North Carolina county health departments and community health centers serving disadvantaged populations. They’re also being used in WISEWOMAN programs in more than seven of the other 14 funded states.

WISEWOMAN — Well-Integrated Screening and Evaluation for Women Across the Nation—evolved from the National Breast and Cervical Cancer Early Detection Program, which provided a model for how preventive cancer care could be given to underserved populations through county health departments and other local clinics. WISEWOMAN uses this outreach method to deliver life-changing health messages to disadvantaged populations. ■

Larry Johnston, a social research associate at the UNC Center for Health Promotion and Disease Prevention, measures the height of a participant in a Wilmington, N.C.-based study of the effectiveness of the N.C. WISEWOMAN project in reducing the risk of heart disease. Study participants were coached by community health advisors to eat healthy and get regular exercise.



PHOTO BY BEVERLY GARCIA



PHOTO BY ANTONIO TIJERA

Women in a market in New Delhi, India, share a light moment together. India is one of more than 30 countries where the MEASURE Evaluation Project provides assistance for population, health and nutrition programs. This is done by strengthening each country’s ability to collect and use health data. MEASURE stands for Monitoring and Evaluation to Assess and Use Results.

MEASURE Evaluation Project uses data collection to raise awareness about pressing health issues in developing countries worldwide

The MEASURE (Monitoring and Evaluation to Assess and Use Results) Evaluation Project works with communities around the world to strengthen each country’s ability to collect and use health data. Such data are critical for many purposes, such as evaluating the program, and describing and assessing health disparities.

“It’s tough to draw attention to a health problem and get funding for it if you can’t measure it,” says Dr. Sian Curtis, MEASURE project director and research associate professor of maternal and child health in the UNC School of Public Health. “The goal is to use information to make better, more informed health decisions, which will in turn lead to improved health outcomes.”

Dr. Gustavo Angeles, assistant professor of maternal and child health at the School, serves as MEASURE’s deputy director.

Funded by the United States Agency for International Development (USAID) and part of the Carolina Population Center, MEASURE facilitates training and capacity-building activities to enhance the development of monitoring and evaluation skills among health-sector professionals around the globe.

Data are used by international partners to raise awareness of health issues and to provide accountability for funding requests.

MEASURE assists about 30 countries in three primary locations—Asia, Africa and Latin America/Caribbean—and provides global assistance for population, health and nutrition programs in developing countries, including work in HIV/AIDS, reproductive health and malaria prevention. ♦

Investigating why a quarter of migrant farm workers get green tobacco sickness in North Carolina fields

Harvesting, or “priming,” tobacco can give seasonal farm workers more than a backache and sunburn—they can get something called green tobacco sickness.

Vomiting, nausea, headache, abdominal cramps, diarrhea, difficulty breathing, dizziness, insomnia, and occasionally even fluctuations in blood pressure or heart rate are the characteristics of this illness caused by nicotine poisoning following skin contact with mature tobacco plants. Although the illness usually resolves, it can lead to life-threatening dehydration. Doctors believe the number of cases seen is only a small proportion of the actual number that exist.

The illness—well-known to the predominantly Latino migrant population that helps harvest this crop in North Carolina—has not been extensively studied through the years, despite the fact that researchers and health care workers have known of its existence for decades.

A collaborative study involving researchers from Wake Forest University School of Medicine, the N.C. Farmworker Health Program and the UNC School of Public Health provides new insight into this illness.

Researchers worked with 182 seasonal workers in 37 migrant farm communities in North Carolina’s Wake and Granville Counties from June through September 1999 to gain understanding of the incidence of green tobacco sickness (known as “GTS”) and the risk factors for the illness. Study participants were interviewed five times over a 10-week period by bilingual interviewers. Saliva samples were collected at each contact to provide measures of “cotinine,” the active ingredient in nicotine.

“We found that nearly a quarter of the study participants got sick with GTS some time during the study,” says Dr. John Preisser, research associate professor of biostatistics at the UNC School of



PHOTO BY DR. PAMELA RAO

UNC School of Public Health researchers collaborated on a study of Green Tobacco Sickness (GTS) among seasonal farm workers in 37 migrant farm communities in North Carolina. The illness causes vomiting, nausea, headache, abdominal cramps, diarrhea, difficulty breathing, dizziness, insomnia and occasionally fluctuations in blood pressure or heart rate following skin contact with mature tobacco plants. Researchers found that nearly a quarter of the study participants got sick with GTS some time during the study.

Public Health, who helped conceptualize, design and analyze the three-year study funded by the National Institute for Occupational Safety and Health (NIOSH) housed within the Centers for Disease Control and Prevention.

Wet conditions increased the rate of dermal absorption.

“If the tobacco leaves were wet or if the workers’ clothing or skin was wet, that increased the rate at which nicotine was absorbed in the body,” Preisser says.

The study of migrant farm workers and other highly mobile populations poses particular challenges, according to Preisser. “Some workers left the study area due to their sickness or otherwise could not be followed to the end of the study. Studying difficult-to-follow populations such as migrant farm workers underscores the vital role that biostatistical planning and analysis have in epidemiological studies of underserved populations.” ■

UNC School of Public Health one of 12 institutions chosen for Kellogg-funded initiative to eliminate health disparities

Carolina’s School of Public Health is one of 12 U.S. schools and graduate programs of public health selected in 2005 to participate in the Engaged Institutions Initiative funded by the W.K. Kellogg Foundation. The initiative supports and promotes sustained efforts of institutions of higher education working in partnership with communities to eliminate racial and ethnic health disparities. The UNC School of Public Health was chosen from among 26 schools and graduate programs that applied. Schools were selected based on their track record of engagement with communities and concrete efforts to eliminate racial and ethnic health disparities.

“Over the past few months, a team we created for this initiative, made up of School faculty and students, university officials, state and local representatives and community members, has been developing a concrete strategic plan for our School becoming increasingly engaged in community activities and research to eliminate health disparities,” says Dr. Geni Eng, ►►

professor of health behavior and health education at the School, who is helping oversee the initiative.

Developing a strategic plan has involved defining the concept of “health disparity”

in a concrete way, Eng says.

“Dr. LaVerne Reid, chair of the Department of Health Education at North Carolina Central University, led our team in a concept-mapping exercise,” Eng says.



Dr. Eugenia Eng

“We looked at ways the National Institutes of Health, the Centers for Disease Control and others define health disparities to see the differences and commonalities among the definitions. The definition we developed evolved from the more conventional definitions that simply address morbidity and mortality among minority groups to one that addresses racism and inequities in environment and income. When we speak of the health effects of inequities, it really does need to move beyond diseases and death and focus on these larger issues that cause disparities.

“We define health disparities as inequities in disease and well-being that come from discrimination and unequal access to society’s benefits, such as quality education, good jobs, decent and affordable housing, safe neighborhoods and environments, nutritious foods, and healthcare. These inequities result in disproportionately higher rates of death, disease, and disability, and have adverse consequences on the physical, mental, spiritual and social well-being of population groups who, historically and currently, do not experience equivalent social advantage. These groups include, for example, African-Americans, American Indians, Hispanics/Latinos, Asian Americans, Hawaiians and Pacific Islanders, people with disabilities, Lesbian/Gay/Bisexual/Transgender/Queer individuals, and people with lower incomes.” ■

UNC to coordinate nation’s largest health study of Hispanics in U.S.

Hispanic populations in the United States have lower mortality rates from heart disease compared to non-Hispanics but have increased prevalence of obesity and diabetes, according to the National Heart, Lung, and Blood Institute (NHLBI), part of the National Institutes of Health. Compared to non-Hispanic whites, Hispanics also have a lower incidence of all types of cancers combined, a lower incidence of the most common cancers (prostate, female breast, colon and rectum, and lung), and are less likely to die of cancer (see page 37).

But will lifestyle changes associated with U.S. culture—such as nutrition, smoking, role of family and community—affect these patterns?

The multi-center, multi-year Hispanic Community Health Study, sponsored by NHLBI, will seek to identify the cultural and behavioral factors that influence disease development in the Hispanic population.

The Collaborative Studies Coordinating Center at the University of North Carolina at Chapel Hill received a six-year, \$22 million federal contract to coordinate the study, which will examine the impact of acculturation—adapting to life in a new environment and culture—on the health of the U.S. Hispanic population. The study will identify the prevalence and risk factors (protective or harmful) for a broad range of diseases, disorders and conditions—everything from heart disease to dental cavities. The researchers plan to recruit 16,000 Hispanic adults from groups of origin, including Mexican-American, Cuban, Puerto Rican and Central/South American.

“This study will be the most comprehensive assessment of health ever done in this rapidly growing segment of the U.S. popula-

tion,” says Dr. Lisa LaVange, UNC professor of biostatistics and one of the principal investigators from UNC’s Collaborative Studies Coordinating Center. “We are thrilled that UNC will be at the forefront of this research.”

The center, which is part of the UNC School of Public Health’s biostatistics department, was selected as the study coordinating center by the NHLBI. The UNC project team will be responsible for study design and monitoring, data management, quality and analysis and coordination of a central laboratory and reading center.

Study participants will be recruited through four field centers located at San Diego State University in California, Northwestern University in Chicago, Einstein College of Medicine in New York and the University of Miami in Florida. Initially, each person will receive an extensive clinic exam and health assessment, and then will be interviewed each year for up to four years to see how their health changes in specific areas that the study is designed to assess.

Study results will be shared with communities involved in the study to help improve public health at the local level.

Dr. Lloyd Chambless, UNC research professor of biostatistics, is principal investigator for the coordinating center. Co-principal investigators are LaVange and Dr. Gerardo Heiss, UNC professor of epidemiology. ■

UNC School of Public Health researchers are studying the impact of acculturation—adapting to life in a new environment and culture—on the health of the U.S. Hispanic population. The six-year study is recruiting 16,000 Hispanic adults from groups of origin, including Mexican-American, Cuban, Puerto Rican and Central/South American.



PHOTO BY WILL OWENS

Older African-American women become ‘natural helpers’ in their rural communities as part of N.C. Breast Cancer Screening Program

The North Carolina Breast Cancer Screening Program, a program of the UNC School of Public Health and the UNC Lineberger Comprehensive Cancer Center, has been successful in increasing mammography rates among the most vulnerable and hardest to reach groups of women—low-income women and those with the least education.

The program, which ran from 1992 through 2002, worked with communities in five counties—Beaufort, Bertie, Martin, Tyrrell and Washington—with the goal of reducing late-stage diagnosis of breast cancer and cervical cancer in older African-American women living in these counties. In these and other rural North Carolina counties, African-American women are more likely than white women to be diagnosed with late-stage cervical cancer and breast cancers. This is tragic. When these cancers are detected early, they have cure rates that exceed 90 percent.

The program pursued its goals through three avenues: an “Outreach” strategy which used a network of approximately 160 “natural helpers,” all older African-American women trained as lay health advisors who worked within their local communities to encourage others to have regular mammograms and Pap smears; an “Access” strategy which worked to overcome barriers to regular screening, including cost, transportation and inconsistent screening referral patterns; and, finally, an “Inreach” strategy which developed and disseminated training programs for radiologic technologists, primary care physicians, family nurse practitioners, and physician’s assistants to ensure there were sufficient health care resources to satisfy the increased demand for mammography and Pap test screenings generated by the program.

“The ‘natural helper’ lay health advisor intervention has been an effective public health approach to increasing screening mammography in low-income, rural populations,” says Dr. Jo Anne Earp, the program’s director and professor of health behavior and health education in the UNC School of Public Health. “These women are connected with communities in key ways and, once trained, work to lead a variety of breast and cervical cancer education campaigns at local churches, businesses and community events. In fact, although the intervention has formally ended, they have adopted the program and continue to educate their friends, families and community members regarding these important health issues.”

The N.C. Breast Cancer Screening Program, a program of the UNC School of Public Health, was successful in increasing mammography rates among the most vulnerable and hardest to reach groups of women in the country—those with low income and the least education.

The program’s success has been unequivocal. In an evaluation of the intervention published in 2002, Earp and colleagues found that mammography use among older African-American women in the intervention counties rose by seven percent above that of a comparison group of randomly-selected women in five counties who did not receive the intervention. Among lower-income women in the intervention counties, mammography screening increased by 11 percent above that of the comparison group.

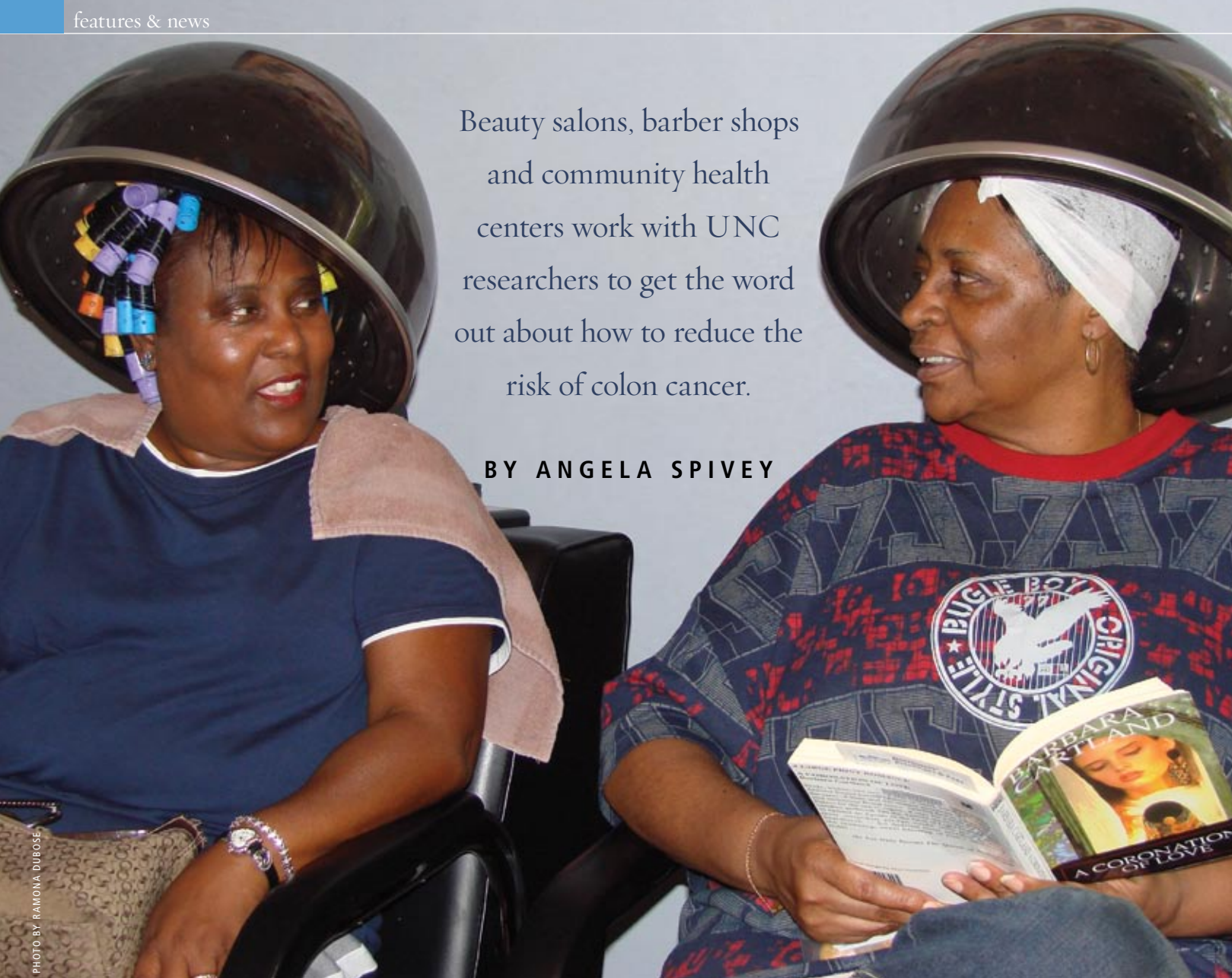
The evaluation also found an increase in positive attitudes toward mammography screening among women in the intervention counties. These changes in attitude were greatest among women who had reported the lowest mammography use and the least positive attitudes toward screening during a baseline study conducted four years earlier.

The evaluation also underscored the profound influence of the lay health advisors in getting the word out about screening. Twenty-four percent of randomly-selected women in the intervention counties reported getting advice about mammography screening from someone in the community, while just seven percent of women in the comparison group reported getting such advice. And 14 percent of women in the intervention counties received mammography advice from a lay health advisor (LHA), while less than one percent of the women in the comparison group named an LHA as her information source.

Study results were published in the *American Journal of Public Health* in January 2001 and April 2002 and in *Cancer Epidemiology, Biomarkers & Prevention* in May 2004, as well as in several health education journals. ■

Beauty salons, barber shops and community health centers work with UNC researchers to get the word out about how to reduce the risk of colon cancer.

BY ANGELA SPIVEY



Making Colon Cancer *a* COMMUNITY CONCERN

If UNC School of Public Health researchers have their way, people will be talking more about colonoscopies and other ways to reduce their risk for colon cancer — and not just during yearly visits with their doctors. “I don’t think we can sit back and wait for people to come to the doctor’s office or the health care clinic,” says Dr. Laura Linnan, associate professor of health behavior and health education at the UNC School of Public Health and member of the UNC Lineberger Comprehensive Cancer Center. “Those are important places, but there are just so many people who don’t have regular physicians or don’t interact with the medical care system at all. We need to go where they are.”

Colorectal cancer is a problem for all races, but it’s particularly crucial that information about how to prevent colorectal cancer gets through to African-Americans, who are more likely to get the disease than whites or any other group. And when African-Americans get colon cancer, they’re more likely to die from it. For both African-American men and women, cancers of the colon and rectum are the third most common cause of

cancer deaths, according to the American Cancer Society (www.cancer.org).

Scientists are working to learn why [see sidebar on page 35]. In the meantime, Linnan wants to reduce those disparities *now*.

For all people, regardless of race, reducing cancer risk means following the guidelines for general health: get regular aerobic exercise and maintain a healthy body weight. “The whole literature on diet and colon cancer is very confusing,” says Dr. Robert Sandler, professor of epidemiology at the UNC School of Public Health and Nina C. and John T. Sessions Distinguished Professor of Medicine.

“But one of the things that’s really apparent is that people who are obese and people who don’t exercise are more likely to get colon cancer. And the good thing about this finding is that it’s something we can intervene on. So if we can get people to avoid obesity, achieve their ideal body weight, and exercise more, we could reduce their risk of getting colorectal cancer.”

Since colon cancer can be treated and cured if found early, getting the recommended screening tests—fecal occult blood test, a sigmoidoscopy or a colonoscopy—at the recommended intervals can help reduce deaths from the disease. “Most colon cancers begin as polyps called adenomas. A colonoscopy can find and remove those so they don’t become cancers,” says Dr. Jessie Satia, assistant professor of nutrition and epidemiology at the UNC School of Public Health. “But African-Americans tend to have lower rates of screening.” ■



Dr. Laura Linnan



Veronica Carlisle, research associate at the UNC Lineberger Comprehensive Cancer Center and BEAUTY project manager, displays materials used in N.C. beauty salons to encourage customers to talk about health concerns. BEAUTY is the acronym for Bringing Education and Understanding to You.

Reaching people where they live

For UNC School of Public Health researchers, reducing colon cancer risk means reaching out to people in the places where they live, work and play. “Even if you know what people can do to reduce their risk, you still have to get the word out in ways that will be meaningful and places that are convenient,” Linnan says, “People are just too busy, and we can’t assume that health is at the top of everybody’s priority list.”

Linnan is leading a team conducting a randomized trial of an intervention where women spend quite a bit of time—beauty salons. Early work from the BEAUTY project (Bringing Education and Understanding To You) shows that 17.3 percent of the women in the study visit the salon weekly, spending on average two-and-a-half hours on each visit. That offers a great opportunity for health talk.

“There are over 11,000 salons in North Carolina alone, and over 60,000 licensed stylists,” Linnan says. “If we figure out just the right methods and intensity of intervention that will encourage licensed stylists to weave cancer prevention messages into conversations they have with customers during a typical salon visit, the opportunity for reaching women and reinforcing these messages at subsequent salon visits is really amazing. The North Carolina BEAUTY and Health Project is designed to do just that.”

BEAUTY compares self-reported behavior changes in diet and physical activity among customers of beauty salons who receive various health interventions while they visit salons. Researchers want to find out if stylists and salon owners, whom the customers already trust, can be effective in conveying information about how to reduce risk of prostate, breast and colorectal cancers, not just for women but also for the men in their lives. If the answer is “yes,” then it is good news since we know they are vital links to many women, as well as men and children.



Exhibits and pamphlets like these provide information to salon customers on diet, exercise and cancer awareness and prevention. Stylists already have trusting relationships with their clients and are trained by the BEAUTY project to educate their customers and support their good health habits and cancer prevention strategies.

A second project also led by Linnan, TRIM (Trimming Risk in Men), has begun to explore the same questions in barber-shops, working with barbers to help their customers make informed decisions about prostate and colorectal cancer screening.

Both projects are examples of community-based participatory research, in which community members help shape all aspects of the research, Linnan says. BEAUTY project researchers recruited an advisory board made up of beauty product distributors, directors of cosmetology schools, salon owners and licensed stylists to help decide how the interventions might be conducted. “We started this effort back in 2000 with a simple question to our advisory board members: ‘What do you think of the idea of promoting health in beauty salons?’” Linnan says. “They were very enthusiastic, but they said, ‘If you don’t have the stylists on board, it won’t work.’ So the first thing we did was conduct a survey of licensed stylists in one North Carolina county to find out if they were interested and willing to participate, if they had preferences about topics they were most comfortable discussing and what type of training they would like.”

Response from stylists was enthusiastic, Linnan says. Researchers sent trained observers to ten salons for about eight hours in each salon. “We found that women in salons spend 18 percent of their time talking about health-related topics and that the



PHOTO BY RAMONA DUBOSE

conversations were initiated equally by stylists and by customers,” Linnan says.

Joyce Thomas, director of the Cosmetology and Barbering Schools at Central Carolina Community College in Sanford, N.C., and a member of the BEAUTY project’s advisory board, knows that firsthand after more than 40 years as a hair stylist. “When somebody is having a problem, they want to talk about it, and they feel like their hairdresser is the one to talk to about it,” she says. “Especially when somebody’s had surgery, they even want to show you their scar. There’s just a closeness there.”

After conducting the observations, a stylist survey and a successful pilot intervention that showed positive changes among stylists and customers, researchers worked with the advisory board members to design a randomized trial of 40 salons frequented primarily by African-American women. All ▶▶

Jane Smith, stylist and owner of Simplicity Styling Salon in Durham, N.C., talks about BEAUTY with client Lisa Colvin. “We’re somewhat like counselors to our customers,” Smith says. “They feel like they can talk to us about anything, anyway. But because of the displays, they felt a little more comfortable [talking about health concerns].”

Why?

UNC researchers look for the reasons behind colon cancer disparities

Are the higher rates of colon cancer among African-Americans and their higher death rates from this disease due to differences in access to care or health information, differences in diet, or even variant tumor characteristics?

Various studies have suggested these reasons and more, but there are no clear-cut answers. “Race is a difficult term to define, and it’s quite likely to be something else—poverty or access to care—that’s really responsible,” says Dr. Robert Sandler, professor of epidemiology at the UNC School of Public Health and Nina C. and John T. Sessions Distinguished Professor of Medicine.



Dr. Robert Sandler

Dr. Paul Godley, adjunct associate professor of epidemiology and biostatistics at the UNC School of Public Health, associate professor of hematology and oncology at the UNC School of Medicine and director of the UNC Program on Ethnicity, Culture and Health Outcomes (ECHO), agrees that as scientists learn more, reasons for health disparities are likely to run the gamut and will be different for various diseases. “It’s going to be everything—from attitudes and beliefs among patients about early detection and screening for a certain cancer, access to screening or prevention programs and access to health care—to the attitudes and beliefs of the physicians taking care of the patients, their ability to either treat patients or refer them for treatment, and racial differences in risk factors for some diseases,” Godley says. ▶▶

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40 salons received poster-sized educational displays for their salons. The 10 “control” salons received displays that featured health

Since colon cancer can be treated and cured if found early, getting the recommended screening tests at the recommended intervals can help reduce deaths from the disease.

topics unrelated to cancer, such as foot care, stress management or preventing back injuries. From the remaining 30 “intervention” salons, 10 received the displays plus stylist training workshops, 10 received displays plus health magazines sent to customers at their homes, and 10 received displays plus stylist training workshops and health magazines sent to customers at their homes.

The idea for including educational displays in the salons came from the results of observations, Linnan says. “We assumed that the stylists were doing most of the talking during a typical visit, but as it turns out, health-related conversations were initiated equally by customers and stylists during a visit. So instead of just assuming that we would give information to stylists, and they would then give it to customers, we realized we had to develop something that would cue customers to talk to stylists. Educational displays in salons are a constant reminder for everyone who frequents the salon—customers and stylists alike. So our developmental work was really critical in guiding the formation of our intervention.”

Jane Smith, a stylist at a Durham, N.C., salon who participated in the study, says the educational displays helped start many conversations about getting screening tests or making healthier food choices. “We’re somewhat like counselors to our customers,” she says. “They feel like they can talk to us about anything, anyway. But because of the displays, they felt a little more comfortable. They could see that we had an interest in it.”

Although the study period is over, the displays are still up in her salon, Smith

says, and many customers still check their weight on the scales the project provided. “Cutting back became a habit to some,”

she says, and she still finds herself trying to choose beverages with fewer calories.

After the two-year intervention period was over, customers completed question-

naires to assess whether they increased fruit and vegetable intake, increased physical activity or reduced the amount of fat in their diets. The customers also reported whether they had gone for cancer screening and maintained a healthy weight, though these were secondary goals of the project.

UNC researchers are still analyzing this data but plan to share the outcomes with stylists and salon owners, along with distributing the most effective educational materials to all the salons. “Consistent with the principles of community-based participatory research, we also plan to engage advisory board members’ and stylists’ advice about how to use these results to plan future research efforts,” Linnan says. ■

Saving lives—from diet to cancer screening

UNC health educators have a history of success sharing health messages in another place that is a big part of many people’s lives—church. In 2005, the National Cancer Institute began offering and promoting the *Body and Soul* wellness program, which Dr. Marci Campbell, associate professor of nutrition in the UNC School of Public Health, created along with Dr. Ken Resnicow, then with Emory University and now with the University of Michigan, as a result of two church-based health intervention projects [see page 9]. *Body and Soul* uses church activities, pastor involvement and peer counseling to encourage church members to eat more fruits and vegetables.

The question is, will similar techniques work to increase rates of colon cancer screening? Campbell and colleagues recently launched an intervention study with African-Americans at urban churches to find out. ACTS (Action Through Churches in Time to Save lives) of Wellness is a four-year study that Campbell and a colleague at the University of Michigan are leading with the help of churches in Durham, N.C., and Flint, Mich.



In this study’s first year, the researchers are conducting focus groups about colon cancer screening and about physical activity habits with members of one church in Durham and another in Michigan. These groups will help researchers tailor the educational materials they will be testing, including a DVD and Web-based decision aid about colon-cancer screening developed by Dr. Michael Pignone, associate professor in the UNC School of Medicine. The researchers also will use individually-tailored newsletters to encourage church members to get recommended screening tests. The newsletters will, for example, include information tailored to the region, such as where screening is offered and how much it costs.

Both the North Carolina and Michigan sites are currently working in partnership with community advisory boards to develop intervention materials and recruit the study churches, says Carol Carr, manager of the ACTS project. ■

A diet rich in the antioxidants found in fresh fruits and vegetables lessens the likelihood of colon cancer. Since cancers of the colon and rectum are the third most common cause of cancer deaths among African-Americans, Dr. Marci Campbell is working with North Carolina African-American church congregations to encourage African-Americans to eat healthfully, exercise and visit their physicians for cancer screening.

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Sandler adds, “There’s clearly some evidence suggesting that lack of access to care causes people to do worse.” In one study, among veterans, African-Americans and whites had outcomes that were similar. “Veterans have the same access to care, despite race,” Sandler notes, indicating that “equal access to care eliminates disparities.”

African-Americans may be more likely to get particular tumor types that might cause them to have worse outcomes. Dr. Richard Goldberg, professor of medicine at the UNC School of Medicine, found that African-Americans with colon cancer didn’t respond as well to a particular type of chemotherapy. While he couldn’t know for sure why racial differences existed, one possibility is that African-Americans (or other racial groups) might get different tumor types or may metabolize chemotherapy drugs differently.

Sandler is helping coordinate two studies seeking to sort out the reasons. He leads the UNC arm of the national CanCORS (Cancer Care Outcomes Research and Surveillance), funded by the National Cancer Institute, which follows 5,000 colon cancer patients from across the country. Researchers are collecting information about factors that might affect patient outcomes, including which hospitals patients visit, the types of health care providers they see, whether they have other diseases and which treatments they receive.

The UNC arm of the study also is collecting samples of tumor tissue from each patient. The researchers will analyze this tissue with special funding from the National Cancer Institute—a Specialized Program in Research Excellence (SPORE) grant in gastrointestinal cancers, led by Dr. Joel Tepper of the UNC School of Medicine.

“Other people have looked at some of the molecular characteristics of tumors, but they didn’t have this whole rich data set that we have from the CanCORS project,” Sandler says. “And other people have done projects like CanCORS, but they haven’t had the tumor tissue. So the power of our study is that we have this rich source of information about the patient, the providers, the health care system, and we also have the tumors.”

In their analyses, the researchers will look for clues as to how tumors might differ among people who have worse outcomes. “There are about 20 different markers we’re looking at that have to do with different ways ▶▶

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A community network

Another project reaching people where they live — the Carolina Community Network (CCN) — was funded by the National Cancer Institute in 2005 to reduce prostate, breast and colorectal cancer disparities among African-Americans in North Carolina through education, training and research.



Dr. Paul Godley

The CCN is led by Dr. Paul Godley, adjunct associate professor of epidemiology and biostatistics at the UNC School of Public Health, associate professor of hematology and oncology at the UNC School of Medicine and director of the UNC Program on Ethnicity, Culture and Health Outcomes (ECHO).

CCN's many projects include providing support and information to help two established community organizations in Eastern and Central North Carolina incorporate cancer-prevention messages into the programs they already offer, says Crystal Meyer, CCN program coordinator.

For example, the CCN recently helped the United Voices of Efland-Cheeks (in Orange County, N.C.) work with a UNC postdoctoral research associate to conduct a seminar about the relationship between diet, exercise and cancer prevention for members of an existing support group for men affected by prostate cancer.

In Eastern North Carolina, CCN partners with The Rocky Mount Opportunities Industrialization Center, which runs a family medical center and a mobile health clinic that has primarily offered HIV/AIDS screening in Nash and Edgecombe counties. The CCN works with the center to add cancer-prevention services to those offerings.

"Over time, we'd like to expand the partnership to include more community partners and hopefully more diseases so that we can have a bigger effect," Godley says.

The CCN has also been working with churches in Rocky Mount, N.C. "We've been trying to connect with churches to let them know about the Body and Soul nutrition intervention program, and we're planning to do one-on-one sessions with churches to implement healthy eating and lifestyle programs with their congregations," Meyer says. ■



The Carolina Community Network has plans to conduct one-on-one sessions with churches in Rocky Mount, N.C., to implement healthy eating and lifestyle programs into congregations.

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that cancer can develop," Sandler says. Examples include DNA repair genes and tumor suppressor genes, which, when mutated, don't perform their normal function of suppressing cancer.

"So if you have a certain pattern of mutations, for example, is your prognosis worse? Or do people with certain tumor characteristics respond differently to chemotherapy or to radiation therapy? By taking advantage of the CanCORS data set, we'll have extensive information on the kinds of chemotherapy patients received and the kinds of radiation that they got," Sandler says.

The CanCORS study is scheduled to follow the patients for one year, though Sandler and colleagues are seeking additional funding. "We'd really like to be able to follow these people for a long period of time," he says. Studies like these are among the most important being done because they help researchers answer the many key questions that have plagued us for years, such as, "What difference does it make when a person gets into the health care system or where they are treated? Is income more important than race? Is tumor type the most important factor?" Much hope lies with large, interdisciplinary studies, led by strong teams like CanCORS, to answer these and other questions with credible data.

— By Angela Spivey

Training TOMORROW'S LEADERS



BY KATHLEEN KEARNS

In myriad ways, the UNC School of Public Health is training the next generation of public health leaders who will help explain, intervene and eliminate health disparities. The School's faculty are training students in key subjects including basic science, biomedical ethics, crisis management, research methodology and substantive public health topic areas. Faculty members facilitate students' engagement with practical public health work in disadvantaged communities, break down language barriers that impede equal access to care and give graduate students first-hand experience disseminating evidence-based interventions. They also promote diversity within the field of public health in the United States and abroad. ►

In formal programs and projects, through faculty- and student-led efforts, in courses and seminars throughout the curriculum, the School provides future public health professionals with the tools they need to understand the nature of health disparities, intervene, and ultimately eliminate health disparities. Here are some of the programs currently underway.



Kellogg Health Scholars Program, Community Track



Dr. Stephanie Farquhar

When Dr. Stephanie Farquhar came to the UNC School of Public Health on a two-year, postdoctoral fellowship with the Kellogg Community Health Scholars Program, residents of some Eastern North Carolina communities were struggling with the aftermath of Hurricane Floyd. Using the community-based participatory research (CBPR) approach, Farquhar collaborated with survivors to design and conduct a survey on their needs and then to communicate the results to policy makers. The report they produced together led to substantial improvements in flood relief policy. Her work is just one example of the CBPR done by Community Health Scholars and their mentors at the schools of public health

at UNC, the University of Michigan and The Johns Hopkins University.

Of 47 scholars admitted at three schools, 27 are from minority populations (19 African-American, six Latino/Hispanic, and two Asian/Pacific Islander). Scholars have authored or co-authored more than 179 publications.

Now known as the Community Track of the Kellogg Health Scholars Program, the fellowship is in its ninth year of training a new cadre of public health faculty. Alumni leave the program with skills needed to build the capacity of communities, health agencies and academic centers such that these entities then function as equal partners in research, practice and education.

Alumni from the program now hold faculty positions in 20 academic institutions and professional positions in four health agencies and institutions, an important measure of success.

Virtually all the research carried out by Community Health Scholars addresses issues of health disparities, and all their investigations follow the principles and guidelines of CBPR. Topics include youth violence, smoking, environmental justice, diabetes, cardiovascular disease, women's health, mental health, obesity, sexual health, air quality, bilingual



training of health workers, hypertension among African-American men, genetics and disparities, stress, cancer and substance abuse.

Scholars who choose the UNC site work closely with faculty mentors and community mentors affiliated with African-American and Latino community-based coalitions. Dr. Eugenia Eng, professor of health behavior and health education at the School, directs the fellowship program at UNC and builds working relationships among academics, community members and public health practitioners.

These research partnerships benefit under-served communities. They also develop a group of health leaders with the skills to eliminate health disparities. W. K. Kellogg Foundation funds the fellowship program. ■

Floodwaters from Hurricane Floyd in September 1999 devastated many areas in eastern N.C. Dr. Farquhar's collaborations with these communities led to substantial improvements in flood relief policy (above and previous page).

Training

Strengthening Bioethics Capacity and Justice in Health

Ethical challenges often arise in the conduct of biomedical research in developing countries from the very same social, economic and political conditions that contribute to poor health outcomes. War, poverty, oppression, the infringement of basic human rights—all may have a powerful impact on health, affect some groups more than others, and may make it difficult to realize the goal of improving public health while protecting and benefiting individuals and communities. Yet until recently, there were few programs to train professionals from the developing world in research ethics that take such inequalities and injustices into account.

Dr. Frieda Behets, associate professor of epidemiology at the UNC School of Public Health, in collaboration with Dr. Stuart Rennie, research assistant professor in the UNC School of Dentistry, Dr. Gail Henderson, professor of social medicine at the UNC School of Medicine, and colleagues from Kinshasa and Belgium, are helping to expand bioethical capacity and training at the University of Kinshasa School of Public Health in the Democratic Republic of Congo.

Through their project, *Strengthening Bioethics Capacity and Justice in Health*, funded by the National Institutes of Health's Fogarty International Center, Congolese scholars complete intensive master-level training in bioethics at the

Catholic University of Louvain in Belgium and then spend up to six months with mentors at UNC. While in Chapel Hill, scholars complete Institutional Review Board (IRB) training, develop curricula and training modules around bioethics issues in the developing world and strengthen their capacity for independent research.

When they return to the new Center of Bioethics at the Kinshasa School of Public Health, they will strengthen ethical review of the IRB there and promote creative, responsible, culturally resonant solutions to bioethical conflicts. Teaching materials the scholars develop at Carolina will be integrated into the Master's of Public Health program at Kinshasa. Impact of their training will spread even further in 2008, when the center will offer a two-week intensive course in bioethics for medical professionals from throughout French-speaking African countries. This course is unlike any other and represents a unique partnership between the UNC School of Public Health and the University of Kinshasa. ■

Emerging Leaders in Public Health

As president of *Comunidades Latinas Unidas En Servicio*, Minnesota's premier Latino social and behavioral health services provider, Jesse Bethke Gomez, helps improve the health of that state's Latino population. Gomez has spearheaded two major health assessments, including one on health disparities. He promotes health-care access for Latinos and serves on a citizens' panel charged with identifying solutions to the growing cost of healthcare.

Gomez is just one of the professionals putting into practice the high-level leadership and crisis management skills he honed in the Emerging Leaders in Public Health ►►



Dr. Frieda Behets

Elliott Brown (top left, previous page), who received his Master of Science in nutrition from the School in May 2006, talks to Dr. Victor Schoenbach about his plans for the future. Maiysha Jones (bottom left, previous page), doctoral student in the Department of Environmental Sciences and Engineering, describes her research to a fellow student during a September 2006 poster exhibit. Betsy Havens and Frances Tain (bottom right, previous page), recent graduates of the master's of public health program in, respectively, health behavior and health education and maternal and child health, share their notes on a research project.

Tomorrow's Leaders



Mekeisha Williams

Health (ELPH) program, which the N.C. Institute for Public Health at the UNC School of Public Health leads in partnership with the UNC Kenan-Flagler School of Business. Gomez's fellow ELPH alumni include African-Americans, American Indians, Asian Americans and other Latino Americans—members of some of the minority groups under-represented in public health leadership.

The two-year-old ELPH program promotes diversity among the next generation of public health leaders by identifying talented individuals and training them to manage in turbulent times through an intensive nine-month program of onsite workshops and distance education. Mekeisha Williams is the director of the Emerging Leaders in Public Health Fellowship, which is funded by the W. K. Kellogg Foundation. ■

(Left to right) Anne Morris, Michele Demers and Michael Scott, master's of public health students in the School's Department of Health Behavior and Health Education (HBHE), work together to create a program plan. The plan is a requirement for all first-year HBHE students in the course "Planning Health Promotion in Community, Worksite, School and Medical Settings."

Carolina-Shaw Partnership for the Elimination of Health Disparities

This partnership between UNC and Shaw University, a historically Black university, is working to eliminate differences in minority health care and status on several levels.

One of the most important aspects of the center's work is in establishing research resources and improving research infrastructure at Shaw so that more African-American college students can become health researchers. The center is also training new investigators at both institutions in health disparities research methodology, and collaborating on a church-based community outreach project.

The partnership has additionally created the health disparities curriculum at UNC and another at Shaw, awarded pilot funds to junior faculty at UNC and historically Black colleges and universities

in North Carolina, and spurred intense inter-university faculty collaboration.

"The structure of the partnership maximizes the exchange of scientific and programmatic activity between UNC, Shaw University, and the North Carolina Office of Minority Health and Health Disparities," says Dr. Daniel Howard, the partnership's co-director. Howard is professor of health policy and director of the Institute for Health, Social, and Community Research at Shaw University in Raleigh, N.C.

Funded by the National Institutes of Health, National Center on Minority Health and Health Disparities, the partnership is directed by Dr. Paul Godley, adjunct associate professor of epidemiology and biostatistics at the UNC School of Public Health and professor of hematology and oncology at the UNC School of Medicine. Dr. Timothy Carey is the partnership's deputy director. Carey directs the UNC Cecil G. Sheps Center for Health Services Research and is clinical professor

of epidemiology in the UNC School of Public Health and professor of medicine in the UNC School of Medicine. ■

Interdisciplinary Certificate in Health Disparities

The Interdisciplinary Certificate in Health Disparities, an integrated program of courses and seminars at the UNC School of Public Health, trains health professionals to assess disparities, conduct basic science on contributing factors, measure access to care, evaluate the role of race and racism in health, and develop and evaluate interventions designed to reduce health disparities.

The certificate program is part of ECHO, the UNC Program on Ethnicity, Culture and Health Outcomes, a joint program of the Schools of Public Health and Medicine.

The health disparities curriculum, on which the certificate program is based, originally was developed through a grant from the Commonwealth Foundation and the Public Health Leadership Program. The curriculum is directed by Dr. Vijaya Hogan, clinical associate professor of maternal and child health in the UNC School of Public Health and adjunct associate professor of obstetrics and gynecology in the UNC School of Medicine. Hogan and Dr. Anissa Vines, research assistant professor of epidemiology at the School and associate director of ECHO, co-direct the certificate program. ■

Students in Action

Even as they pursue their degrees, undergraduate and graduate students at the UNC School of Public Health are doing practical public health work in communities in the United States and abroad. ►►

The Evolution of the School's ANNUAL Minority Health CONFERENCE

"A large part of public health is bringing your knowledge to the public, so having the experience of planning something major like this is great," says LaToya White, one of the co-chairs of the 2007 Minority Health Conference, to be held February 23 at the UNC William and Ida Friday Center for Continuing Education.

White and co-chair Nancy DeSousa are graduate students in the Health Behavior and Health Education department in the UNC School of Public Health. They're also members of the Minority Student Caucus, which launched the annual event in 1977 (see page 52). The conference is the oldest student-organized minority health conference in the United States. Every year, it draws hundreds of students, professionals and community members from across the country. Last year, more than 300 people attended.

"You can experience all aspects of public health at the conference, and it really influences how students see themselves as professionals coming into public health," White says. "Students hear firsthand what works well for other people, and they also hear from community members. They're better able to serve their communities because of this experience." DeSousa echoes that view: "One of the benefits of the conference is getting all these different voices in the same room," she says. "It adds to students' professional experience. They're

networking not only with professionals and public health experts, but also with other students who will be working in the health field."

"The event is also an important educational event for public health practitioners, human services professionals, research staff, and students and faculty from other universities," DeSousa says.

The topic for the 2007 conference is "HIV/AIDS after 25 years: Where things were, are, and are going for minority communities." The keynote speaker will be Dr. David J. Malebranche, assistant professor of medicine at Emory University's School of Medicine, AIDS researcher with a public health background and physician who treats AIDS patients in Atlanta.

The student organizers want to keep the focus domestic, White says. They plan to look at HIV/AIDS in various minority communities in the United States. "We want to look at college-age students and the different issues for women. We hope to have representatives come and represent the different minority groups—African-American, Latino, Asian, Pacific Islander, American Indian."

DeSousa and White served on the planning committee for last year's conference on "community-based participatory research." "It's a major conference, and a lot goes into organizing it," White says. "It's beneficial for students to be involved in planning something like ►►

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PHOTO BY LINDA KASTLEMAN

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this because these are skills that will be needed later when working in the field of public health."

The Minority Student Caucus was formed in the early 1970s, in part to help diversify the profession by attracting more students of color to the School. Other School organizations involved in the conference include the Student Union Board, the Minority Health Project and the N.C. Institute for Public Health. The North Carolina Department of Health also supports the event, along with the UNC School of Public Health. The conference keynote lecture is broadcast each year by satellite and Internet, and the lecture abstract, slides and Webcast are archived online at the conference Web site at www.minority.unc.edu/sph/minconf. Videotapes of the broadcast are distributed by the Public Health Foundation.

These technologies expand the conference's impact beyond the roughly 500 people who take part each year. "I've only been able to 'attend' the Webcast of these lectures," Professor Alice Furumoto-Dawson of the University of Chicago told past organizers. "Yet, every year the UNC School of Public Health Minority Health Conference Webcast and its associated Web site have been among the most informative and useful events/resources I access during the year." ■



LaToya White and Nancy DoSousa, co-chairs of the 2007 Minority Health Conference, have big plans for the February event. The two are graduate students in the School's Department of Health Behavior and Health Education.



Naman Shah, who received his Bachelor of Science in Public Health from the School's Department of Environmental Sciences and Engineering in May 2006, poses with youngsters from the Children's AID clinic in Georgetown, Guyana, where he volunteered with at-risk youth in December 2005. Shah traveled to Guyana to initiate a study he designed that will examine and establish genetic markers for the resistance of a new anti-malarial drug, Co-Artem.

Through the *Action-Oriented Community Diagnosis* class (see page 57), student teams get real-world experience with communities and service providers and learn to analyze the social determinants of health. In this class and in many other ways, public health professionals still in training at the School are putting their education—and their passion—to work on community health issues, and they're broadening their knowledge at the same time. Here are a few examples:

◆ Naman Shah, who earned a Bachelor of Science in Public Health from the School's Department of Environmental Science and Engineering in May 2006, went to Cambodia as an undergraduate to train American and Cambodian health workers in genetic techniques he developed for detecting drug resistance in malaria. He also spent three weeks in Guyana as a mentor for a project on malaria and iron deficiency anemia. He is now an immunization officer with a World Health Organization polio eradication campaign in India. Working directly with underserved individuals and populations has strengthened his commitment to a public health career,

he says. It also brings him great personal satisfaction.

- ◆ Between her junior and senior years, Barbara Frank spent a month in Guadalajara, Mexico, taking medical Spanish classes and volunteering at a free clinic. The hands-on experience confirmed her decision to become a physician. She completed her Bachelor of Science in Public Health in the School's Department of Nutrition this year and is now in medical school. She plans to provide care to the Latino community. "To see the healthcare status in Mexico and realize that I could help once I receive my degree made it even more clear that I was choosing the right profession," she says.
- ◆ Robin Briggs, who earned her Master of Public Health in Maternal and Child Health this year, worked with Dr. Frieda Behets as a research assistant on a Global AIDS Program in the Democratic Republic of Congo. Robin says that UNC understands that a crucial part of education is not leaving lessons in the classroom but applying them immediately in the field, whether that means working with migrant workers in North Carolina or pregnant women in the Congo. ■

¡A su salud!

INTRODUCTORY SPANISH FOR HEALTH PROFESSIONALS

A wardrobe truck sits at the entrance of the Ambulatory Care Center at UNC Hospitals. In the second-floor lobby, a makeup artist puts the finishing touches on an actor's face; up in the third-floor pharmacy, movie lights and cameras move into position, people in headsets focus intently on their script binders, and a voice calls for silence. On this summer Saturday, the patient care facility has been transformed into a film set—all to help health professionals provide better care to their Spanish-speaking patients.

¡A su salud! ("To your health!") is an innovative, multimedia Spanish language program built around authentic health situations. The intermediate course is offered as an elective to residential and distance education students at the UNC School of Public Health as well as the other UNC health science schools, the School of Social Work, and to undergraduates in the UNC College of Arts and Sciences' Department of Romance Languages. The Office of Continuing Education at UNC's School of Public Health and the UNC William and Ida Friday Center for Continuing Education also offer the intermediate course via a distance learning format to those outside the university. And, the curriculum's publisher—Yale University Press—offers a free guide for those who wish to use the intermediate course materials for self-study available through their Web site at <http://yalepress.yale.edu/yupbooks/salud>.

Now the Salud team—an interdisciplinary group of health professionals and Spanish-language educators from across

the Carolina campus—is hard at work on an introductory-level program. A professional film company is shooting its centerpiece, a broadcast-quality Spanish soap opera or *telenovela*, and they're underlining its realism by doing some of the filming at the UNC Ambulatory Care Center.

Claire Lorch, Salud project director and a clinical instructor in the Public Health Leadership Program (PHLP) at the UNC School of Public Health, says that preparing health professionals to communicate more effectively with their Latino patients can help improve health outcomes. "Latinos in need of medical care often face enormous challenges," she says. "Few health care professionals speak Spanish or really understand Latino immigrant culture. As a result, Latinos rarely receive adequate preventive care, and they are less likely to follow treatment guidelines. Latinos tend to enter the system only when they urgently need services, and that puts a strain on their health and on the health care system." Nationwide, she notes, fifty percent of Latino immigrants are unable to speak English sufficiently well to communicate with their health care providers.

"If a provider can communicate directly with patients, there's a greater bond there, a greater chance the provider will have the full picture, get the context," says another member of the Salud team, Christina A. Harlan, a research assistant



Cast and crew for the *¡A su salud!* ("To your health!") multi-media Spanish language program film a broadcast-quality Spanish soap opera on the Carolina campus. The program is designed to help health professionals provide better care to their Spanish-speaking patients. Here, Dr. May Farnsworth, a lecturer in Spanish in the UNC Department of Romance Languages, portrays a distraught Hispanic mother trying to relay her daughter's medical needs to a pharmacist, played by Frank Balthazar. *¡A su salud!* is offered to students through the UNC School of Public Health.

professor in the PHLP and a public health nurse who also teaches in the UNC School of Nursing. "If you don't have the language or if you bring in an interpreter, it totally changes the dynamic." ►►



PHOTO BY EMILY J. SMITH

The *¡A su salud!* film crew shoots a broadcast-quality Spanish soap opera on the Carolina campus. The soap opera is designed to teach Spanish to health care professionals. From left to right is Geoff Gann (gaffer), Tom Sherer (assistant director) and Lamar Owen (director of photography).

Harlan's philosophy is that good health requires a team approach. "It's something we do together," she says. "In order to have that cooperation, that networking, that collaboration and partnering, having the language and working effectively across cultures is tremendously important."

By design, *¡A su salud!* episodes portray Hispanics as a diverse group of people and expose participants to a wide range of accents. The program also emphasizes cultural learning. "We feel our mission is language and culture, and the culture is not secondary to the language," says Dr. Elizabeth Tolman, visiting assistant professor of Romance Languages at UNC and a language consultant on the Salud project. Cultural misunderstandings can interfere with provider-patient understanding, she points out. "In some cultures from Latin America, instead of making eye contact, patients might look down to show respect. You might think they're shy or they don't understand or they are disrespectful, but they are showing great respect."

The introductory *telenovela* focuses on two immigrant families, a family that recently arrived in a Southern town and a well-established family that has been in the community for many years. "We wanted to introduce some of the perspective of Latino immigrants," says Dr. Deborah Bender, a fourth member of the team and a clinical professor of health policy and administration in the UNC School of Public Health. "We felt it would be really important for beginning students in particular to understand in a more global way where these folks are coming from." Tolman reports that health professionals who took part in a pilot program at the introductory level said they had more positive interactions as a result of taking the class. "They were more relaxed, and their patients were more relaxed," she says.

The drama includes real-world situations that health practitioners are likely to encounter: for example, a social worker talks with an adolescent to assess whether she has a drug or alcohol problem; a physician tries to tell a teenager that she has a sexually transmitted infection; and a physical therapist instructs a patient on how to use crutches. Course materials also will feature a series of reflections in English by practicing professionals who have encountered language and cultural barriers.

At the UNC Ambulatory Care Center, Meredith Greene, an outpatient pharmacist at UNC Hospitals, is taping one of those reflections. "It's important to know Spanish in my job," she says. "I need to tell patients what the medicine is for, how to take the medicine, what the side effects are and how to get in touch with the doctor if they need to." In her experience, she says, a patient getting a prescription filled will

often come in with a child. "You'll speak with the kid, and they'll translate," she says. "Since I know Spanish, I know they don't always translate all the information. They don't translate every word you say, just what they understand. In other words, there is some information that gets lost."

The intermediate level *¡A su salud!* course was funded by the Office of the Provost at UNC and by a grant from the U.S. Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE). The Office of the President of UNC, the North Carolina GlaxoSmithKline Foundation, Blue Cross and Blue Shield of North Carolina and The Aetna Foundation are funding the introductory program. *¡A su salud!* is a project of the Office of Distance Education and E-Learning Policy at the William and Ida Friday Center for Continuing Education. The introductory *¡A su salud!* will be offered at UNC and partner institutions by spring 2008 and distributed nationally soon after. For more information on the project, contact Claire Lorch at clorch@email.unc.edu or (919) 962-4011. ■

—By Kathleen Kearns

Laura Wadford, a professional make-up artist, prepares actress Dr. May Farnsworth for the camera. Farnsworth acted as an "extra" in the production, but her starring role was that of linguist. She was on the set to ensure that actors spoke clearly and used dialect appropriately.



PHOTO BY EMILY J. SMITH

OVERCOMING DISPARITIES: *Highlights from our past*



Dr. Milton Rosenau, Founding Dean, UNC School of Public Health

Dr. Milton Rosenau, the UNC School of Public Health’s first dean, believed that every person deserved sufficient education and resources to “meet the needs of his body and the demands of his health.”

From its inception, the UNC School of Public Health followed his lead in working diligently to improve the public’s health through cutting-edge research, innovative program development, and high-quality public health education and health services delivery. Faculty and students worked with communities around the world, especially African-American communities throughout the U.S. South, whose quality of life was compromised by poverty, disease and limited educational opportunities.

The School’s community and human rights focus in the United States set it apart from more clinically-oriented public health schools at Harvard and Johns Hopkins universities.

From the start, the School at UNC had an independent, reform-minded spirit, resulting in an unprecedented number of women faculty members and students, groundbreaking development of multiracial teams working with North Carolina communities as early as the 1940s, and social activism beginning in the ’60s.

The School’s early history, according to UNC Kenan Professor Emeritus Dr. John Hatch, was driven by “decent people, in the right place at the same time, all trying to do

BY LINDA KASTLEMAN

the right thing.” Their work has set the pace for research, teaching and practice being done now to reduce health disparities. Here, we look briefly at two examples of the School’s commitment—Dr. Lucy Morgan’s pioneering collaboration in the 1940s with the North Carolina College for Negroes (now North Carolina Central University) and the establishment of the Minority Student Caucus in 1976. Along with the timeline below, we highlight the roots of the School’s commitment to overcoming racial and ethnic disparities in health and education.

Dr. Lucy Morgan: “A revolutionary, in the best sense of the word”

By all accounts, Dr. Lucy Shields Morgan was a powerhouse. As the founding chair of the UNC School of Public Health’s Department of Public Health Education — the first of its kind in the country — she was both pioneering and revolutionary. »



Dr. Lucy Morgan

History in the Making:

A selected timeline of our School’s work in overturning health disparities

1930s

1936
Dr. Milton Rosenau becomes director of the new Division of Public Health at the UNC School of Medicine, intent upon developing the practical aspects of public health and addressing the health needs of all people.

1940s

1940
The Division of Public Health separates from the UNC School of Medicine and becomes the UNC School of Public Health, with Rosenau as dean.

1942
Dean Rosenau invites Yale-educated Dr. Lucy Morgan to teach and develop a curriculum in public health education at the UNC School of Public Health. Twenty-five students enroll in spring 1943.



1945–46: First Health Education class at N.C. College for Negroes

1945
Morgan designs and teaches a collaborative public health education program—led by UNC faculty—at the North Carolina College for Negroes (later N.C. Central University), UNC and in her own home. Her ground-breaking (and rules-breaking) training for public health workers becomes a national model for effective health care delivery and public health education. Her efforts may have been the first, if unsanctioned, instances of integration in the classroom at UNC.

1950s

1950
Eleanor Roosevelt speaks to a public health education class on the UNC campus at the invitation of Dr. Lucy Morgan.

1955
The School’s Department of Health Education contracts with the U.S. Public Health Service to create a health education training program focused on the needs of American Indians.



Indian Reservation in the U.S. Southwest, circa 1950s

1959
Dr. John Cassel, a South African expatriate who left his country because of its apartheid policies, becomes the first chair of the School’s new Department of Epidemiology.

1960s

1960–62
UNC Epidemiology Professor Dr. Sidney Kark (a South African expatriate whose research includes studies of syphilis in African populations) and UNC Epidemiology Professor Dr. John Cassel launch the Evans County (Georgia) Cardiovascular and Cerebrovascular Epidemiologic Study to find out why Black male sharecroppers have lower rates of heart attacks than middle-class white males in that county. The study is the first to confirm the importance of physical activity in promoting cardiovascular health and was, for some time, the only cardiovascular disease cohort study with a substantial enrollment of Black participants.

Throughout this decade, School faculty and students are involved in sit-ins and marches advocating desegregation and civil rights. African-American and international students grow in number, and their presence serves as a catalyst for change.

Timeline compiled by Linda Kastleman

Morgan's father was president of the University of Tennessee and director of the Tennessee Valley Authority (TVA). Harcourt Morgan valued the TVA's ability to make the lives of ordinary citizens more efficient and comfortable so that the larger community could thrive. "Man's greatest need in the distraction of the age," he noted, "is to see the unity that runs through diversity. No two people are alike, yet we are all brothers."

Having adopted her father's ideology, Morgan earned her doctorate from Yale in 1938 and founded a community health program in Hartford, Conn., which included African-Americans among its administrators and served as a model for similar programs around the country. In 1941, she joined the U.S. Public Health Service and was sent to Fort Bragg, N.C., to study the rise of prostitution at the military base. Almost as soon as she arrived in North Carolina, she was invited by Dean Rosenau to develop a curriculum in Public Health Education at Carolina's new School of Public Health.

At that time, Dr. James Shepard, president of the North Carolina College for Negroes (NCC) in Durham, N.C., had been negotiating with the General Education Board to create graduate-level training in public health for African-American students. His vision was to establish a master's degree program in health education at NCC. Morgan was asked to

explore the feasibility of developing such a program, and she quickly determined that a need existed.

NCC faculty, however, had not yet been trained in public health education. Given the still-segregated campus at UNC at Chapel Hill, Morgan led her faculty to NCC's campus in Durham to teach master's level courses in public health education. Morgan often held joint classes for NCC and UNC students in her home.

Her strategy for field work was radical in the segregated South. Pairing white and African-American students, she sent two-person teams into rural communities where health education and health services were most needed. "They had to be introduced to each other," she recounted in Robert Korstad's *Dreaming of a Time*, a history of the School's first 50 years. "They had never done that before. At that time, [whites] were not supposed to eat with Blacks, so we always had refreshments at the meetings. We had open houses when people came in from the field, Black and white together. Then it got bitter for awhile, and we used to pull down the shades sometimes when we had meetings in Chapel Hill."

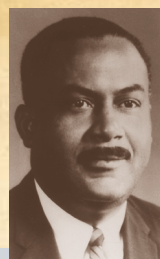
Morgan's contribution to the health education program was incalculable.

African-American graduates of the program became faculty—both at NCC (including Dr. Howard Fitts, who chaired NCC's Department of Health Education and later served on the Durham County Board of Health) and at UNC (including Dr. Howard Barnhill, who also served in the N.C. General Assembly). Morgan helped grow the health education department into the largest of its kind at a school of public health in the country, and oversaw, during the 1950s and '60s, the training of almost half the country's health educators.

UNC President Emeritus William C. Friday, whose wife, Ida, studied with Morgan in the master of public health education program and later taught there, called Morgan a "pioneering integrationist with a depth of soul that was instructive and remarkable; a revolutionary, in the best sense of that word." ■



Former First Lady Eleanor Roosevelt, an untiring advocate of the public's health and safety, addresses Dr. Lucy Morgan's health education class in 1950. A friend of the Morgan family, Roosevelt visited the campus at Morgan's invitation.



Dr. Edward V. Ellis



Dr. Guy Steuart

This decade is characterized by an exponential increase in the number of minority faculty and students at the School. Two departments are chaired by minorities.

1970s

1964

William A. Darity (June) and Edward V. Ellis (August) become the first African-Americans to receive doctoral degrees (in health education) from the UNC School of Public Health and the UNC Graduate School.

1968

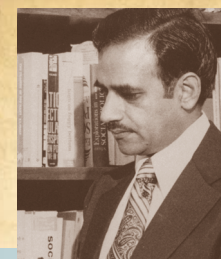
South African native Dr. Guy Steuart joins the UNC School of Public Health as chair of the Department of Health Education (later called the Department of Health Behavior and Health Education). In his work with colleagues in South Africa, Steuart developed the Action-Oriented Community Diagnosis methodology, which uses an interdisciplinary approach to gain a nuanced understanding of the dynamics, resources and problems of communities and how they affect the living conditions and health of individuals who live in them. This methodology is now taught at the UNC School of Public Health and is often used in working with poor or vulnerable communities (see page 57).

1971

After Black students express concern, Dr. Fred Mayes, the School's third dean, appoints William T. "Bill" Small to the position of coordinator of minority affairs at the School with a charge to increase the School's minority student enrollment. Within the next year, the number of minority students increases from 20 to 49.

1971

The Black Student Caucus of the UNC School of Public Health is organized.



Dr. Sagar Jain

1971–86

Dr. Sagar Jain, born in India and educated in the United States, becomes chair of the Department of Health Administration (later to become the Department of Health Policy and Administration).



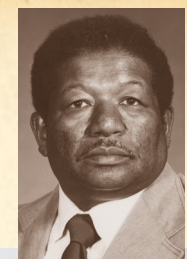
Dr. Bernard Greenberg

1972–82

Dr. Bernard Greenberg, founder and chair of the Department of Biostatistics from 1949-72, becomes dean. To increase minority enrollment, as much as half the scholarship assistance offered during some years of his tenure is reserved for minority students. Greenberg also encouraged the School's departmental chairs to actively recruit minority faculty, an endorsement that resulted in significant increases in African-American faculty at the School.

1974

John W. Hatch, an African-American, receives his Doctor of Public Health from UNC and joins the faculty of the School's Department of Health Behavior and Health Education. He later becomes Kenan Professor of Health Behavior and Health Education. His work and the department's emphasis on community organizing results in projects aimed at improving the health of minorities.



Dr. John W. Hatch

Public health as a movement:

Minority Student Caucus evolves from grassroots efforts



Students attend presentation at the 1984 Minority Health Conference. From its humble beginnings in 1977, the conference has grown to include more than 400 participants each year.

In his laboratory work, UNC School of Public Health Epidemiology Professor and South African expatriate Dr. John Cassel found that disruption of “society” in a community of rats caused disorientation, stress and illness. He observed similar patterns in his work providing medical care to the poor in South Africa. People in difficult situations, Cassel found, coped better if they could depend on others to understand and support them. He further posited that even when one

could not intervene with money or services to improve the well-being of a community, one could at least work to create a more psychologically supportive environment.

Such revelations were applicable in the late 1960s on the Chapel Hill campus. Black students, new to campus and in an environment of upheaval, faced the stresses of isolation and of faculty and programs that did not always understand or meet their needs. Many minority students working toward master’s degrees had been in the work force for years before returning to school. They wanted more opportunities to discuss career goals and challenges specific to minority public health professionals.

African-American graduate students began meeting informally in the early ’70s for support and to exchange ideas. Dr. John Hatch, an African-American, was among this group. Hatch came to UNC in 1971 as a doctoral student teaching at the School of Public Health. Ultimately, he became a Kenan Professor in the School’s Department of Health Behavior and Health Education, retiring in 1995.

In 1971, Dr. Fred Mayes, the School’s third dean, appointed William T. “Bill”

Small, himself African-American, to become a full-time minority recruiter at the School to ensure that potential minority students were identified, encouraged to apply and assured of help with financial aid if accepted.

Small—who ultimately became associate dean and senior advisor for multicultural affairs, retiring in 1999—had many contacts among African-American public health professionals in North Carolina communities and health departments and created much interest in the program. As minority student enrollment doubled that year, the Black Student Caucus came into being to support the needs and goals of this growing population. It also served as a vehicle for bringing concerns to the attention of the School’s administration.

In 1976, graduate students Eugenia Eng, a Chinese American, Victoria Washington, an African-American, and Cherry Beasley, a Lumbee Indian, advocated that the Caucus be inclusive of students from all racial and ethnic groups, so that their unique strengths, needs and concerns could be addressed. That year, by unanimous vote of the membership,



Dr. John Hatch came to UNC in 1971 as a doctoral student teaching at the School of Public Health. Ultimately, he became a Kenan Professor in the School’s Department of Health Behavior and Health Education, retiring in 1995.

the Black Student Caucus became the Minority Student Caucus of the School of Public Health.

In 1977, the Caucus organized its first annual Minority Health Conference—a day-long event highlighting health ➤



Dr. Joseph Edozien

1980s



Dr. Jo Anne Earp

1990s



Dr. William Roper



Dr. Paul Godley

1975-86

Dr. Joseph Edozien, of Nigeria, serves as chair of the Department of Nutrition.

1976

The Black Caucus becomes the School’s Minority Student Caucus.

1977

The School’s Minority Student Caucus organizes the first annual Minority Health Conference. The conference has been held every year since then, with the exception of 1989 and 1990 (see pages 43 and above).

1985

The U.S. Department of Health and Human Services releases its task force report on Black and minority health. The School gets federal research funding to study critical minority health issues, including:

- A continuation of the Evans County study on cardiovascular health and exercise;
- A study of blood pressure among Blacks in Edgecombe County;
- Smoking cessation research, conducted in collaboration between School faculty and the Black-owned N.C. Mutual Life Insurance Co.; and
- A Minority Cancer Control Research Program, which includes the New Hanover Breast Cancer Screening Program (forerunner of the N.C. Breast Cancer Screening Program, directed by Dr. Jo Anne Earp from 1992 to 2002—see page 31) and studies of fiber intake by Blacks.

1991

Victor J. Schoenbach, a 1979 Department of Epidemiology graduate and faculty member, works with William T. Small, Jr., to restart the Annual Minority Health Conference after a two-year hiatus. He is later made principal investigator of the School’s Minority Health Project, continuing the Project’s Annual Videoconference and initiating broadcasts from the Annual Minority Health Conference.

1994

The School’s Minority Health Project is started.

1994

The UNC School of Public Health and the UNC Kenan-Flagler School of Business together obtain funding for the Emerging Leaders in Public Health program, which identifies minority public health leaders and helps them develop ways to manage resources and communicate effectively about health crises within their communities.

1997

With funding from GlaxoSmithKline, federal agencies and others, Dean William Roper launches The Program on Ethnicity, Culture and Health Outcomes (ECHO) (see www.echo.unc.edu).

1997

Dr. Paul Godley, adjunct associate professor of epidemiology and biostatistics at the School, and Dr. Daniel Howard of Shaw University, receive a five-year National Institutes of Health grant to create the Carolina-Shaw Partnership for the Elimination of Health Disparities (see page 42).

issues of concern for people of color. Designed to attract students interested in minority health to the School, the event featured Keynote Speaker Floyd McKissick, a lawyer and civil rights activist in North Carolina.

The Conference—now in its 28th year—has become an important educational event, attracting more than 400 public health practitioners, human services professionals, research staff, students and faculty from all over the country each year (see page 43).

In 1999, Dean William Roper permanently named the conference’s keynote lecture for Small, recognizing his essential role in recruiting and mentoring minority students to the School for more than a quarter of a century.

The Minority Student Caucus continues to be a strong force at the School, uniting students and serving as a vehicle for bringing the concerns of minority students to the forefront. The Caucus also works with the School’s administration on Project Reach to link to the Historically Black Colleges and Universities, especially in North Carolina, and to institutions serving other minority groups. ■



Dr. Bill Jenkins with Dara Mendez (left), a doctoral student in maternal and child health, and Mayra Alvarez (right) a 2005 graduate of the School’s Department of Health Policy and Administration. Mendez and Alvarez coordinated the 2005 Minority Health Conference.

CAROLINA’S SCHOOL of PUBLIC HEALTH APPOINTS SPECIAL ASSISTANT to the DEAN for DIVERSITY & continues tradition of cultivating diversity

BY LINDA KASTLEMAN

Dr. Jessie Satia was born in the state of Washington but grew up in Cameroon.

“I am quite literally an ‘African-American,’ having lived in both places,” she says. Now, Satia, assistant professor in the UNC School of Public Health’s Departments of Nutrition and Epidemiology, has accepted the challenge of bringing more minority students, faculty and staff to the School.

In appointing Satia to the position of special assistant to the dean for diversity last January, Dean Barbara K. Rimer noted, “When diversity is everyone’s business, sadly, it often is nobody’s job. In creating this role, I wanted to make it *somebody’s* business and, by doing so, help us all. Dr. Satia is the perfect choice. We wanted her to return to UNC, after spending two years in industry. She’s an impeccable scientist and teacher and a charismatic person who will be able to motivate others to join her journey.”

Satia continues the School’s tradition of encouraging minority students and faculty to come to Carolina. From the outset, School leaders have recognized the need for the faculty, staff and student body to reflect the diversity of the N.C. and U.S. populations (see timeline on page 48). In that sense, Satia follows in the footsteps of Dr. William T. Small, Jr., who came to UNC in 1971 as coordinator of minority affairs with a charge to increase minority student enrollment in graduate degree programs. During Small’s 28-year tenure, he continued to enhance the diversity of the School population.

Satia brings a unique perspective to her role. Her parents, both of whom have doctoral degrees, are from Cameroon. Her mother, who has a Ph.D. in educational psychology, and her father, a fisheries expert, were studying at the University of Washington—Seattle, when she was born.

“When my parents finished school and worked for a while—I was about four years old at the time—they decided they wanted to return to Africa and give back to their homeland,” Satia says. ►



Dr. Jessie Satia

2000



Dr. Barbara K. Rimer



Dr. Jessie Satia

and beyond...

2005

Dr. Barbara K. Rimer is named dean and makes overcoming health disparities a primary goal in her leadership of the School.

2006

Dean Rimer appoints Dr. Jessie Satia, assistant professor of epidemiology and nutrition, as special assistant to the dean for diversity, with a focus on increasing the number of diverse faculty members. School’s mission statement is revised to include focus on health disparities.

2006

UNC School of Public Health is selected as one of only 12 schools to participate in the Engaged Institutions Initiative, funded by the W.K. Kellogg Foundation. The initiative supports the sustained efforts of institutions of higher education working in partnership with communities to eliminate racial and ethnic health disparities.

2006

The Department of Maternal and Child Health receives a federal grant enabling the launch of a new doctoral training program in applied epidemiology aimed at addressing health inequities.

2006

The School’s Collaborative Studies Coordinating Center receives \$22 million federal contract to coordinate a nationwide health study of Hispanics in the United States. The Hispanic Community Health Study will examine the impact of acculturation—adapting to life in a new environment and culture—on the health of the U.S. Hispanic population.

“Cameroon was a great place to grow up,” Satia adds. “African values are strong in terms of discipline and respect for people. Although my family was educated in the United States, my parents tried to give my younger sisters and me those traditional values.”

Satia returned to the United States to attend the University of Washington—Seattle, where she earned a bachelor of science degree in microbiology, a master of science degree in laboratory medicine, a master of public health degree in epidemiology and a doctorate in nutritional epidemiology.

Following are some of her thoughts on diversity at Carolina’s School of Public Health.

Q: Why is diversity important to the School?

A: First of all, people bring their unique cultural and social perspectives to any relationship or exchange of information. In public health, which is intrinsically related to people’s backgrounds and identities, it’s enriching to have a diverse group of faculty and students. Their variety allows us to get a fuller understanding of the issues that we face as public health practitioners.

Second, people relate better to others who are like themselves. So, if you are conducting a study about the African-American community, participants tend to respond more fully when African-American researchers and staff are involved.

As we know, America is a melting pot—a place of great cultural diversity. We are a country of people from all over the world, and the population of the School of Public Health should reflect that.

Q: How are you developing strategies to increase diversity among students, faculty and staff?

A: My first charge is to promote the opportunities Carolina has to offer minorities, including excellent educational opportunities and social support.

To enhance these experiences, it is



important that we conduct research that attracts people from diverse backgrounds. Minority researchers and students are eager to be a part of investigations that concern them, and their involvement will increase the diversity of our faculty and student body.

I want to ensure that we have a presence at every possible forum to showcase our School—to encourage minority students to attend and minority faculty candidates to apply when we have faculty openings. We also are undertaking some practical, administrative tasks—updating the Diversity pages on the School’s Web site, developing a detailed plan for recruitment and retention, working on training grants focused on health disparities, designing a guidebook with information about the area that would be of interest to minorities. We are creating a catalogue of churches and restaurants, schools and

“It’s enriching to have a diverse group of faculty and students. Their variety allows us to get a fuller understanding of the issues that we face as public health practitioners.”

social settings—information that reflects the diversity in our community and shows that people who want a multicultural experience will enjoy living here.

Q: Tell us about your own research with minority populations.

A: Most of my research focuses on health disparities among African-Americans and whites, investigating the way modifi-

able behaviors like diet, physical activity and supplement use contribute to risk for colorectal and prostate cancers.

I’m also studying cancer survivorship. People are living longer with cancer because of improved screening and treatment. But once diagnosed, a patient has a higher risk of a recurrence or a second primary cancer. I’m interested in understanding how to prevent second cancers and survive the diagnosis and treatment in a healthy way.

Q: Why do you think it is important for more students of color to become involved in biomedical and bio-behavioral research?

A: Students are our greatest ambassadors. They are enthusiastic about their work, because everything’s new and exciting to them. More importantly, they are the next generation, the ones who are

going to take over. A lot of us may think we’re going to work forever, but we won’t, and we need to train the next cohort of researchers.

The most important reason we want to involve minority students, however, is to have our School mirror society. Communities throughout the world and all over America are diverse, and so it is important that our students, faculty and staff reflect that diversity. ■

Action-Oriented Community Diagnosis



Getting involved and knowing the communities they study helps students learn to diagnose problems, plan solutions

BY ELIZABETH FRENCH

Students pursuing a masters degree through the Health Behavior and Health Education department at Carolina’s School of Public Health all enroll in “Action-Oriented Community Diagnosis,” a course which requires students to get involved in communities to determine—or diagnose—the public health issues of that particular group by working directly with the people they are studying.

“Action-Oriented Community Diagnosis is not a term that easily rolls off your tongue,” observes Dr. Geni Eng, professor of health behavior and health education at the School. “And it sounds awfully medical for a field that promotes health rather than cures disease. Yet, there is a good reason why we still use these words to describe what has been the cornerstone course for our master’s program for more than 35 years.”

Action-Oriented Community Diagnosis, or AOCD, was a term first coined in the 1940s by a small group of South Africans, including a psychologist named Dr. Guy Steuart, who would eventually join the UNC School of Public Health faculty, Eng explains. The pre-apartheid government of South Africa charged Steuart and his physician colleagues to establish a National Health Corps of young doctors to work in South African community health centers located in poor, Black, rural and urban communities. From 1945 until

1959, Steuart and his colleagues also spearheaded the first studies of how poverty and racism affect health.

This group’s approach was to work with communities, getting their “insider’s view” of problems and combining that perspective with their own knowledge. Drawing from the disciplines of psychology, epidemiology, and anthropology, members of the new National Health Corps spent significant time gaining a nuanced understanding of a community’s dynamics, resources and problems.

“These methods not only gave researchers crucial insight into pathways of health and illness, they also gave community members themselves a powerful tool for identifying untapped strengths and resources,” Eng says.

Steuart and his colleagues had to discontinue their work in South Africa when the new government began applying apartheid policy to the medical professions. The researchers left to pursue work elsewhere. Steuart joined the UNC ►►

School of Public Health in 1968 as chair of what was then called the Department of Health Education.

“Guy established AOCD as the centerpiece of the department’s master’s program with Dr. Leonard Dawson (former clinical

Action-Oriented Community Diagnosis methods not only give researchers crucial insight into pathways of health and illness, they also give community members a powerful tool for identifying untapped strengths and resources.

professor of health behavior and health education who died in September 2006) at the program’s head for 15 years—training graduate students like me on the importance of social networks as community assets on which to build our work in community health education,” Eng says. “And the good fortune has been mine to lead our master’s program for the last 19 years.”

The AOCD course started by Steuart has resulted in many community dialogues. Eng estimates that during the last 35 years, more than 1,000 UNC public health students have worked with over 260 North Carolina communities.

Starting each October, as many as five teams of five or six graduate students work to gain entrée into communities which are defined by geographic region, racial or ethnic background, or by a particular attribute. In the 2005-2006 academic year, for example, students worked with the homeless in Orange County, N.C., with disabled individuals in Franklin County, N.C., and with the burgeoning Latino community in Johnston County, N.C. Throughout the fall, students devote significant time volunteering with various community organizations, eating in local diners and cafes, participating in community events, and meeting with local leaders, all while carrying a full load of courses and carrying out duties as research or teaching assistants.

“In almost all of the community diagnoses we conduct, we are working with poor or otherwise vulnerable communities for upwards of eight months,” Eng says.

Kate Shirah, a graduate of the department’s masters program and now a co-

Three months into the AOCD process, students are ready to take a more formal approach to their assignment. “At that point, they conduct multiple in-depth interviews with community leaders, service providers and community members themselves,” Shirah says. “When they combine the perspectives of all these stakeholders with their own observations and research, our students are able to identify themes that can be acted on.”

Towards the end of each spring semester, each team organizes a community forum that brings all the stakeholders together to discuss findings from the report and to flesh out a plan for the future.

In spring 2006, Eng, Shirah and the students of AOCD were recognized with the University’s Engaged Scholarship Award, established by the UNC Office of the Provost in 2000 to recognize extraordinary public service at the University, particularly service efforts that respond to community concerns and that integrate these endeavors into the teaching and research missions of the University.

Examples of students’ Action-Oriented Community Diagnoses can be found online at www.hsl.unc.edu/phpapers/phpapers_2006.cfm. ■

Creating Community Conversations

Student-led community forum helps Johnston County Latinos find their place

Johnston County, N.C., is known best as a primarily rural county southeast of Raleigh. Once, cotton ruled the landscape, and later, tobacco. Now, both agriculture and industry are the economic mainstays.

Johnston’s population nearly doubled during the last three decades of the 20th century. Much of the growth came from Latinos, who now make up nearly eight percent of the population, giving Johnston one of the larger Latino populations in the state.



The Latino population brings its own set of health issues, says Molly McKnight, now a second-year master’s student in the UNC School of Public Health’s Department of Health Behavior and Health Education. Statistics indicate that compared to whites, Latinos in the United States have higher injury rates on the job, lower birth weights for newborns and increased rates of chronic illnesses such as diabetes and asthma.

As the population has increased (400 percent in North Carolina over the last decade, the nation’s fastest growth rate), it also has diversified. “About ten years ago, Latinos in North Carolina were mostly composed of migrant workers,” McKnight says. “Now we’re starting to have a more ‘settled-in’ population. Rather than the pattern of single males leaving their home countries to do seasonal work in the U.S., we’re seeing Latino families calling North Carolina their permanent home.”

McKnight was one of five UNC School of Public Health master’s students who spent the 2005-2006 academic year documenting the strengths and the challenges of the Johnston County Latino community as part of an “Action-Oriented Community Diagnosis” class. Gail Garcia and Gladys House, both of Johnston-Lee-Harnett Community Action—a local non-profit organization

addressing the needs of low-income people in their home counties—provided guidance for the students throughout the process. They found that the barriers Latinos face mirror those outlined in state and national findings. “Even though the job base has expanded out from the agricultural industry, they still work very long hours at low-paying jobs, which means they have little time to go to English classes or take on leadership roles in their communities,” McKnight says.

Statistics indicate that compared to whites, Latinos in the United States have higher injury rates on the job, lower birth weights for newborns, and increased rates of chronic illnesses such as diabetes and asthma.

The students also found that rents were high compared to income, and few had health insurance, leaving them vulnerable if they got sick or needed preventive care services.

The students found many strengths within the Johnston County Latino community, too.

Members of an Action-Oriented Community Diagnosis team focused on exploring the barriers that Latinos in Johnston County, N.C., face, pose with a banner developed for the project. Translated, the banner reads: “United to better our communities/The Latina community in Johnston County.” From left to right are Sarah Weaver, Molly McKnight, and Stacey Bailey, School of Public Health students; Gail Garcia and Gladys House of the Johnston-Lee-Harnett Community Action which helped with the project; and Helen Cole and Laura Seman, UNC School of Public Health Students.

“Latino immigrants are widely recognized as very hard workers, so many employers are eager to hire them,” McKnight says. “The community also places a high value on helping each other out, so there’s already a strong informal support network in place to build from.”

A community forum held at the end of the AOCD process also produced several significant outcomes. Community members and leaders—with help from the student team—developed an action plan focused on expanding educational opportunities, reducing employment abuse and poor housing conditions, and developing greater leadership and formal collaboration within the community.

Listening to Those without Voices

Students earn trust of homeless to discover and document what works, what's needed

In 2005, public service providers in Orange County, N.C., started working on a “Ten-Year Plan to End Homelessness.” To assist them, leaders there asked Dr. Geni Eng, co-director of the Action-Oriented Community Diagnosis (AOCD) class at the UNC School of Public Health, for help from master's students in this course. Eng is also a professor of health behavior and health education at the School.

“We had partnered with other nearby communities in the past to conduct an AOCD of persons who are homeless,” says course co-director Kate Shirah, “so I think we are a familiar and trusted resource to service providers and clients in Chapel Hill.”

Five first-year master's students worked on this project throughout the 2005-2006 academic year as part of their AOCD class. Stan Holt of Triangle United Way provided guidance for the students throughout the process. As documented in their report, homelessness represents a pressing public health problem for millions of people. Many within this population suffer from mental illness, alcoholism and malnutrition along with such chronic diseases as diabetes, heart disease and asthma.

In Orange County, students found that many of the homeless are scattered throughout the county, camping in the woods or in the backyards of family and friends. “This was a challenging assignment because we were only able to reach those who had some affiliation with the system—that is, people who were staying at the shelters. But this approach left out a considerable portion of those dealing with homelessness, and probably some essential information in understanding the concerns of the community,” says Rebecca Davis, one of the students who worked on this project.

Over time, the students were able to gain the trust of members of the homeless community and explore some of the major hurdles preventing them from obtaining stable housing. Topping the list was a need for affordable housing, combined with livable wages. As one community member cited in the AOCD report put it, “The wage around here is low, and then the rent's high. If you get a job, it's either pay your rent or buy food.” People also had a pressing need for resources such as telephones with voicemail so that potential employers could contact them, a public transportation system that would serve employees doing shift work, and job training.

Despite the formidable challenges to ending homelessness in Orange County, the students also reported major ongoing efforts to address this problem. “Getting to know some amazing people dealing with homelessness was probably the most rewarding aspect of working on this project,” says Rebecca Davis. “In fact, the number of services offered for the homeless in this area, and the time and effort the county has put into addressing this issue, are already impressive. Many service providers show true concern and want to reach out.”

The steering committee for the “Ending Homelessness” project has continued to rely on the AOCD report as it develops workgroups to address issues the students brought to light.

“I came away from this project with a deepened respect for the ways in which communities, when given the chance, will utilize their resources to lessen or eliminate disparities in a way that makes sense to them,” Davis says. ■

Individuals gather to register for a community forum on homelessness in Orange County, N.C., in spring 2006. The event—attended by city council members, UNC students and faculty, community members and members of the homeless community—was the culmination of a project coordinated by UNC School of Public Health students for an Action-Oriented Community Diagnosis class in which students assisted the county in developing a “Ten-Year Plan to End Homelessness.”



NEW CENTER PROMOTES Healthy Mothers and Children

BY LINDA KASTLEMAN

Dr. Miriam Labbok, professor of the practice of public health and director of the Center for

Infant and Young Child Feeding and Care, fills the room with vibrancy and passion for the work she has come here to do.



Dr. Miriam Labbok

“Research shows that nature had it right—mothers and babies are healthier when breastfeeding happens,” she says. “It is the single most effective intervention for improving the lives of infants and toddlers in developed countries and saving children's lives around the world.”

It was “serendipity, or maybe a blessed confluence” that brought Labbok to the School's Department of Maternal and Child Health, she says. With a Doctor of Medicine and a Master of Public Health from Tulane University, Labbok had worked with the U.S. Agency for International Development and had been on the faculty at Johns Hopkins and Georgetown universities. She was working in mother and child health at UNICEF just as the Center was being formed.

Funded through a generous gift from a North Carolina family (who wanted to remain anonymous), the new Center is focused on three primary goals:

- ◆ Compiling the evidence for good infant and child feeding and care through translational and epidemiological research;
- ◆ Using that evidence in social and political arenas to support policies and programs that benefit mothers and children; and
- ◆ Training future maternal and child health leaders.

Already, the Center is addressing these goals. It was a collaborator in developing the North Carolina Department of Health and Human Services report, “Promoting, Protecting and Supporting Breastfeeding: A North Carolina Blueprint for Action,” online at www.nutritionnc.com/breastfeeding/breastfeeding-ncActionPlan.htm. The Center also presented its first annual scholarship award in April 2006 to master's student Sheryl Wallin Abrahams, who spent the summer in Washington, D.C., creating a sustainability assessment plan for an infant feeding program in Bolivia.

Labbok would like to see a true breastfeeding “norm” developed in North Carolina and around the world—something that will happen naturally, she believes, “when, as a society, we ensure that families are enabled to make educated, unbiased choices about the feeding and care of their young children and when we can institute the healthcare, workplace and social support necessary for giving our children the best possible start on life.”

She praises several colleagues for their vision and support, including Dr. Herbert Peterson, chair of the Department of Maternal and Child Health; Mary Rose Tully, director of lactation services at Women's and Children's Hospitals at UNC and instrumental in the creation of the breast milk bank at the WakeMed Health Care System in 1992; Greg Duyck, associate director of corporate and foundation relations for health affairs at UNC; and Marcia Roth, director of planning and development in the School's Department of Maternal and Child Health.

“It is such an honor to be associated with this effort,” Labbok says. “My colleagues are extraordinary. The members of the donor family lend insights and energy to our efforts here. There is no better location than the UNC School of Public Health, which is already widely recognized for its service and advocacy.” ■

From left: Marcia Roth, Dr. Miriam Labbok and Dr. Herbert Peterson discuss the upcoming activities of the School's new Center for Infant and Young Child Feeding and Care.



Dual Role for HOMELAND SECURITY LEADER

Disaster Management Professor is also Chief of Staff in Washington D.C.

BY GENE PINDER

Calling it quite simply the best opportunity of his career, Dr. J. Bennet Waters couldn't resist

the chance to help start one of the most important offices within the U.S. Department of Homeland Security—the office of the Chief Medical Officer.

It has meant weekly commutes from his Durham, N.C., home to Washington, D.C., precious time away from his wife and two young children, and 14- to 16-hour workdays.

It's also meant endless meetings with other government officials, constant pressures in such a high-profile environment, and daily responses to potential homeland security threats.

Have we also mentioned that Waters, who has a master's degree in public health and a doctorate in health administration, is teaching a graduate course for the UNC School of Public Health's Department of Health Policy and Administration (HPAA) during this 2006-2007 academic year?

It's hectic, but the offer to become part of the Department of Homeland Security was just too good to pass up. He began his position in Washington D.C., in December 2005, just four months after starting his position as assistant professor and deputy director for executive programs in HPAA. He is now "on loan" to Homeland Security until December 2008. Prior to joining the School's faculty, Waters was president and chief operating officer for Piedmont Healthcare Management group in Charlotte, N.C. Before that, he was administrative director of the emergency department at Carolinas Medical Center, a Level-1 trauma center and academic teaching hospital in Charlotte.

"A year ago, who would have thought I would be spending time in the White House, meeting with Cabinet Secretaries and working on Capitol Hill?" Waters says. "It's just phenomenal."

It's no simple task either.

As chief of staff for Homeland Security's Chief Medical Officer, Waters must "make the trains run on time"—meaning he had to help develop a strategic plan for the office, build an enduring infrastructure, and execute the plan. He navigates the budgetary and fiscal waters of the federal government and deftly avoids turf battles to implement the vision of his boss and mentor, Dr. Jeffrey Runge.

"Using a private sector perspective, it's similar to a startup situation in



Dr. J. Bennet Waters

which one has an idea, gets some working capital and then builds a functional organization," Waters says.

The Office of the Chief Medical Officer has four primary responsibilities: (1) coordinate the department's biodefense activities; (2) ensure the department has a unified approach to medical preparedness; (3) develop and maintain workforce protection and occupational health standards for the department; and (4) serve as the Secretary of Homeland Security's principal medical advisor, providing real-time incident management guidance. For Waters, the experience gained in Washington will be invaluable in the classroom.

"I've developed my syllabi using a combination of personal experiences, a review of the literature and my ongoing engagement with the community preparedness and disaster management arenas," Waters says. "It's really exciting to be a part of both worlds."

Now, if he could just figure out a way to make both worlds be in the same location. ■



Dr. J. Bennet Waters (right) with his wife, Jane, and two daughters: Talbot, 2 (on Jane's lap), and Annie, 1, (on Bennet's lap).

PROFESSOR TURNED CEO gives back to the School

New public health challenges inspire Gillings to invest in the School's Department of Biostatistics

BY RAMONA DUBOSE

Twenty years ago, the practice of public health seemed to be sailing along on a sea of successful interventions that had revolutionized the health of the nation, and to a large extent, the world. Vaccinations, sanitation, modern pharmaceuticals and preventive health care all seemed to be working miracles.

"We thought we were conquering disease," says Dr. Dennis Gillings, CBE (Commander of the British Empire), former UNC biostatistics professor and now chairman and chief executive officer of Quintiles Transnational Corp.

Then along came AIDS, SARS, antibiotic-resistant strains of tuberculosis and malaria...

"Public health is entering a pioneering age again," he says. "We have a huge human challenge before us."

To help Carolina's School of Public Health meet that challenge, Gillings made a gift of \$2.4 million that will be further supplemented with a state match to endow the Dennis Gillings

Professorship in Biostatistics. The Gillings Distinguished Professorship is held by Dr. Danyu Lin, who came to UNC in 2001 from the University of Washington. Last year, Lin received the prestigious Method to Extend Research in Time (MERIT) Award by the National Institutes of Health. Additionally, Gillings has made several other substantial gifts to support other departmental programs.

As a professor in the biostatistics department from 1971 to 1988, Gillings and UNC Professor of Biostatistics Dr. Gary Koch, along with a handful of graduate students, applied the latest methodologies to the analysis of clinical trial data for pharmaceutical companies. The business was incorporated as Quintiles in 1982. A few years later, Gillings left the School to run the company full time. Quintiles Transnational is now the world's leading pharmaceutical services company with annual revenues of \$2 billion. The work he and Koch started at the School continues, though, with Koch as director of the Biometrics

Consulting Laboratory.

Gillings felt inspired to support the School with a professorship endowment for several reasons.

"I was a professor in the School, and that brings a strong affinity to its goals and aspirations," he says. "Also, while I was here, I learned much of what I needed to know to found Quintiles. This is one way of recognizing the School's role in the success of the business."

A third reason for making the donation, he says, was his strong desire to help the School meet the challenges facing public health as efficiently as possible.

"In the '70's, I detected a somewhat emotional attitude toward public health problems," he says. "But everything is not automatically worthwhile. Public health resources are not infinite. The success of public health in the future depends on a business mind being part of the equation."

To meet newer, bolder challenges, and to repeat the amazing public health successes of the past, tough



Dr. Dennis Gillings

choices have to be made, he says.

"The public relates to individual stories, not statistics" he says, "but the fact is, we have a responsibility to represent public health through broad-based application."

"The extent of the impact public health practice will ultimately have depends more and more on its ability to combine academic strengths in discovery and training with business strengths in efficiency and finance," he says. "In other words, do the most good we can with the resources available."

Gillings sees a critical role for biostatisticians in helping define and advance those applications. "Statisticians have to be more than just mathematicians," he says. ►►

Glenn selected to lead School's development efforts

PEGGY DEAN GLENN HAS JOINED THE UNC SCHOOL OF PUBLIC HEALTH AS ASSOCIATE DEAN FOR EXTERNAL AFFAIRS, RESPONSIBLE FOR DEVELOPMENT AND ALUMNI RELATIONS.

Glenn brings more than 20 years' development experience to UNC. She has been an associate dean



Peggy Dean Glenn

at Duke University's Nicholas School of the Environment and Earth Sciences in Durham, N.C., for the past eight years. Before joining Duke, she was regional director of development for The Nature Conservancy in Chapel Hill, N.C., for seven years. Previously, she was president of a New York-based consulting firm.

"We are delighted Peggy has joined our School," says Dean Barbara K. Rimer. "She

brings a wealth of experience and is well-grounded in public health issues. At the Nicholas School, she was actively engaged in fundraising related to water quality, environmentally-induced disease and the health implications of climate change. Not only is Peggy well positioned for her new role at UNC, she is also a Carolina parent and knows firsthand the role we play in North Carolina and around the world."

"They have to provide valuable information to society that will benefit society. Statisticians should be the gatekeepers for good, reliable, valid information. If we are to make advances in society, they must be based on valid data."

This is the view of statistics held by the late Dr. Bernard Greenberg, former chair of the Biostatistics Department and later dean of the School. "He said you start with a strong theory, but you have to follow it all the way through to the public health application," Gillings says.

Born in London, Gillings earned his undergraduate degree in mathematical statistics from the University of Cambridge in England in 1967 and his doctorate in mathematics from the University of Exeter in 1972, after which he joined the UNC faculty. By 1981, Gillings had become a full professor in the UNC School of Public Health and was named director of UNC-CH's Biometric Consulting Laboratory.

Gillings has helped the School and University in numerous volunteer capacities, including serving as a board member of the School of Public Health's Advisory Council, the Graduate Education Advancement Board of UNC's Graduate School, the North Carolina Institute of Medicine and the UNC Health Care Systems. He received the Honorary Degree of Doctor of Science from the University in May 2001.

"We are so grateful to Joan and Dennis Gillings for their

generosity to the School of Public Health," says Dean Barbara K. Rimer. "We have benefited from their wisdom as well as their tremendous financial gifts. I am especially pleased to have a professorship named for Gillings, because Dennis Gillings' own career is such an important beacon for us. He has shown that theory and practice are not polar opposites. Rather, they are interwoven, and practice is what, in the end, we must influence if we are to improve the public's health. In his own work, he has demonstrated that outstanding biostatistical work can be used to better human health through the conduct of impeccably-managed clinical trials conducted around the world."

Gillings presented the inaugural Dean's 21st Century Lecture at the School in December 2005, speaking about what he called "The Value Proposition." (It can be viewed at www.sph.unc.edu/about/webcasts.)

"To improve world health, we must deliver effective healthcare products and services to the greatest number of people for the lowest cost," he says. "The School of Public Health trains practitioners for the 'healing and caring professions.' All well and good, but healthcare is also a very tough business. It's about costs, customers and products—therapies and services... These are the strengths of the private sector. I think the future advances in world health will result from combining academic strengths and business strengths." ■

"YOUR GIFTS ARE INVESTMENTS AND WE THANK YOU FOR EVERY ONE OF THEM. The return on your investment will be far more than the gratitude of public health researchers, teachers and students, though you will have that in abundance. Your return will be solid information on your gift's impact—discoveries made, students trained, publications made possible, clinics supported, lives touched and the public's health transformed. You will know that your gift—your investment—has made a difference in the protection of the world's health and America's future."

— DEAN BARBARA K. RIMER

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Dr. Hong Li

UNC SCHOOL OF PUBLIC HEALTH ALUMNUS DR. HONG LI RECALLS TWO SPECIAL CHARACTERISTICS OF HIS YEARS IN THE SCHOOL’S DEPARTMENT OF HEALTH POLICY AND ADMINISTRATION—THE REFRESHING INTERNATIONAL FLAVOR OF THE FACULTY AND STUDENTS AND A FOCUS ON SYSTEMATIC ANALYSIS AND LOGICAL THINKING.

Employed by Bristol-Myers Squibb Co. in Singapore as director of Outcomes Research for the Asia Pacific region of the company’s Department of Global Epidemiology and Outcomes Research, Li says his training at the School gave him both the technical skills and the broad-minded approach necessary to succeed in his work.

“We live in an environment that includes people from many nationalities, and we should recognize that everyone can bring different skills and perspectives to the table,” he says. “This is certainly true in the field of ‘outcomes research,’ where often there are no ‘right’ or ‘wrong’ answers. Rather, we learn most when a diverse group of scientists provides input about how to proceed.”

Li works with colleagues to investigate the clinical and economic value of medicines manufactured by the company.

“Systematic analysis and logical thinking are crucial,” Li says. “In my current position, I interact with government officials, researchers, university faculty and health care providers. What I enjoy most is sharing our different views and reaching a

common ground that suits everyone involved.”

Li is one of many School alumni who have chosen to support the UNC School of Public Health through annual financial contributions. He is a member of the School’s Rosenau Society, which recognizes alumni and friends who give the School \$1,000 or more each year in unrestricted funds. The Society is named for Dr. Milton J. Rosenau, the School’s first dean.

Annual financial contributions made by the School’s alumni and friends help the School attract and support the best students from around the world, recruit and retain exemplary public health faculty, and invest in new programs and research to improve public health.

“I’m proud to be a UNC alumnus,” Li says. “I’ve become a member of the Rosenau Society because I greatly appreciate the education I received at the School of Public Health. I want to contribute my ‘two cents’ worth’ to support the School’s mission to train world-class healthcare researchers whose work will benefit people everywhere.”

Join the Rosenau Society — make an annual unrestricted gift to the School of \$1,000 or more. Complete the enclosed gift envelope and help our School meet its most critical needs.

The Challenge Continues

UNC professor offers to match—dollar for dollar—all donations to the School’s Student Travel Fund

UNC SCHOOL OF PUBLIC HEALTH ALUMNA VANESSA ROMMELMANN DID NOT KNOW ABOUT A UNC SCHOOL OF PUBLIC HEALTH PROFESSOR’S CHALLENGE TO ALUMNI WHEN SHE DECIDED TO “GIVE BACK” TO THE SCHOOL THAT SHAPED HER CAREER. BUT SHE



Vanessa Rommelmann

was inspired when she was told about it—For every dollar you donate to a fund for student travel opportunities, the unnamed faculty member pledged, I’ll donate a dollar, too.

Now working as a statistician at Research Triangle Institute (RTI) in Research Triangle Park, N.C., Vanessa studies ways to improve pregnancy outcomes. Her work is a rewarding means of using the master’s degrees in biostatistics and maternal and child health she earned from the School in 2003. Vanessa also holds a Bachelor of Science in Public Health from the School.

During graduate school, Vanessa traveled to Tanzania for a summer where she learned about the health surveillance systems to monitor diseases, track health outcomes and make health policy decisions.

She feels fortunate that, as a student, she did not have to worry much about finances. Support from the Carolina Population Center and a supplement from former UNC Department of Maternal and Child Health Chair, Dr. Pierre Buekens, who donated to a student travel fund, allowed her to make the important trip to Tanzania.

“It’s wonderful to travel to a place you care about and to know you’ll learn something there that you can’t experience anywhere else,” Vanessa says. “Lack of money shouldn’t keep a person from making those kinds of discoveries. I was lucky—not everyone has the opportunities I did.”

Quietly re-investing in other students’ prospects for seeing the world is one way Vanessa manages to share her good fortune.

Create travel opportunities for students by supporting the UNC School of Public Health’s student travel fund. Complete the enclosed gift envelope and invest in the world—one student at a time.

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